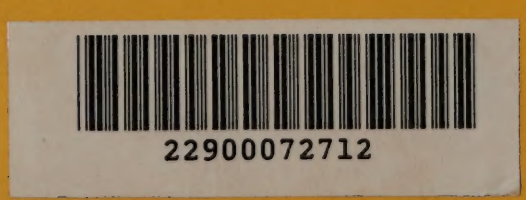
Urban-Metropolitan Health Requirements for California in 1975



Urban-Metropolitan Health Requirements for California in 1975

State of California
Department of Public Health
Lester Breslow, M.D., Director
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This study was originally conducted by the Medical Care Studies Unit. Unit staff were responsible for the selection and organization of content, researching and drafting substantial portions of the text, and final editing. The breadth of study naturally involved many other Departmental staff. Each person listed below contributed to the completeness of this research.

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This report is the second major effort by the California State Department of Public Health to survey personal health services in California as they exist today and as they should be directed in the future. The first study by the Governor's Committee on Medical Aid and Health (1960) set the scene for continuing inquiry. Five years later, this investigation permitted an examination of current trends in personal health services and identification of those factors which must be understood before they can be molded into health improvements for California's people.

Both of these endeavors addressed themselves to the imperative for comprehensive health planning. In their search for factors which influence maintenance of good health, both of these studies endorsed the principles advanced in U.S. Public Law 89-749:

> Comprehensive health planning can provide the mechanism through which --
>
> All health planning can be linked and strengthened; and clear purpose secured;
>
> Health status can be measured, goals and objectives defined, priorities set, and actions planned for;
>
> Service, manpower, and facility needs can be identified and interrelated; and program accomplishments assessed.

The present report, while of inherent value to the Department in its many functions, also serves as one segment of a large-scale project to guide statewide planning for California. The California State Development Plan Program was initiated in 1962, supported by a grant from the Federal Housing and Home Agency. The Program was designed to: reveal the present pattern of responsibility for development in California; describe the state's economic, social and environmental conditions by region; and forecast the population and economic bases for future years.

This particular study focused on personal health services available in California during the mid-60's, factors which influence the organization, cost and use of these services, and projections to 1975, where they were feasible. It concentrated on identifying those aspects of medical science and resources that must be taken into account if health planning is to have tangible value for people. It emplasizes the importance of the quality of personal health services.

Where data were available by urban areas, analysis included this stratification. In health planning, for a state that is rapidly becoming so largely metropolitan, it is not easy to segregate "urban-metropolitan health requirements" from those of the total California population. The difficulties of making well-founded statements about the health of people living in the "country" are discussed in Chapter 2. Therefore, for the most part, this discussion concerns the health of all Californians. A number of special health hazards of rural life, which are largely socioeconomic rather than environmental, are mentioned.

This document has proved valuable, even prior to publication, to Departmental staff. In the past year, as the Department has focused more and more of its energies on statewide and regional health planning, the data and policies expressed within have been useful. While the facts and policies do not cover, with equal emphasis, every aspect of the Department's interests, they do represent a general appraisal of California's health situation, and where future efforts should lie.

The health of the people is really the foundation upon which all their happiness and all their powers as a State depend.

Benjamin Disraeli, Earl of Beaconsfield
Speech, November 19, 1873

Chapter 1

INTRODUCTION

In developing a long-range plan for California, health deserves a high priority. Acceptance of the World Health Organization definition of health -- the physical, mental and social well-being of people -- in fact, makes health the main goal of state planning.

Obviously many factors besides specific health services influence health. Economic resources, productivity, social conditions, early life experiences -- all of these and dozens of other factors bear upon the well-being of a people. Achievement of health, therefore, rests upon total state development, not just on physicians and other health personnel and health facilities. Hence, it is appropriate that attention to planning for health be integrated into comprehensive planning for state development.

As in the case of its general development, California can undertake planning for health from a base of substantial achievement and with great promise for the future. Health conditions in California, compared to those of other states and other countries, are good. The general mortality rate is low; many of the diseases which threatened previous generations are now under control; death rates for heart disease and cancer, the two current leading causes of death, are now declining in California.

However, two great problems immediately confront those who undertake health planning. One is the fact that progress has been uneven. While major segments of the State's population have benefited from the great advances, other groups still lag with respect to health. For example, infant mortality (one of the most sensitive indexes of health conditions) is 22.3 per 1,000 live births in California,[1] approximately the same as that in the rest of the United States. However, this rate is substantially higher than that of persons living in northern and western European countries as well as in some other countries of the world. Furthermore, whereas in California the infant mortality rate among white persons is 21.6, the rate among Negroes is 34.1, and for persons of other races (principally Japanese and Chinese) it is 12.8.[2] Judged by this particular criterion, then, health conditions in California are good but not the best in the world; considerable differences in health exist between large groups of the population. Moreover, it is not obvious how specific health services themselves can be responsible for such substantial differences as that between the white and the nonwhite groups.

The second problem is that of using growth itself, and the attendant flexibility deriving from the inevitable expansion of specific health facilities and services, to achieve optimum health conditions. For example, it is estimated that during the next several years California will add several thousand hospital beds and many thousands more in other health facilities,[3] as well as undertake a substantial amount of remodeling of present health facilities. The very extent of growth and change in California provides a better opportunity than exists in other parts of the country to achieve over a relatively short time period a situation closer to the ideal. This will be accomplished to the extent that planning is undertaken and conformity with the plans can be achieved. Growth viewed in this sense becomes an opportunity rather than a difficulty.

The purpose of the present paper is to examine the use of personal health services and facilities by persons living in urban-metropolitan communities and other parts of the state, with particular emphasis on groups of persons with special problems; to identify and analyze factors which influence the pattern of care in these communities, including age, sex, race, employment, income and other factors; to identify future requirements for health services; and to formulate recommendations for health services planning and programming -- taking into account the desirable roles of Federal, State and local government as well as the private sector of society. The data to be used for this purpose consist of information regularly accumulated by the State Department of Public Health, as well as information derived from special studies over the past several years and information from outside sources. Assembly and analysis of data have been undertaken, in accordance with general requirements set down by the State Office of Planning, by those units of the State Department of Public Health with the greatest experience in the particular subjects. For example, the Bureau of Hospitals

has undertaken that part of the work pertaining to hospital planning*; the Division of Dental Health, its appropriate sphere. Not only have the several units of the Department assembled the facts pertinent to their responsibilities but they have also introduced the main concepts underlying progress in these specific fields of endeavor.

Recommendations for planning concepts and tools conclude the paper.

* Since this report was written, the functions of the Bureau of Hospitals have been administratively separated into three bureaus under the new Division of Patient Care Facilities and Services: Bureau of Health Care Services, Bureau of Licensing and Certification, Bureau of Health Facilities, Planning and Construction. References and sources of data in tables reflect the situation as of June 1966, when the Bureau of Hospitals was still a single entity.

Chapter 2

IDENTIFICATION OF CALIFORNIANS WITH SPECIAL HEALTH PROBLEMS

There are at least two major axes along which one may study Californians with special health problems. On one axis, it is useful to examine demographic classifications with respect to their particular vulnerability to illness, injury and death; on another, to examine leading causes of disability and death with respect to their relative prevalence in certain population groups. In this chapter, both of these approaches are considered, with special emphasis on trends and future developments as far as these can be anticipated.

DEMOGRAPHIC VARIABLES

Age

Of all the demographic variables, age is probably the most intimately related to both morbidity and mortality. In a real sense, every age group has its "special health problems." Two particular groups of people whose age predisposes them to greater risk of health impairment are the very young and the elderly. In recent decades, the population of California has been growing both "older" and "younger" at the same time. In 1940, 6.6 percent of the population were under 5 years and 8.0 percent were age 65 and over. In 1960, these proportions were 11.4 percent and 8.8 percent respectively.(4) Hence, age is a significant factor in planning personal health services for the future.

The California Health Survey disclosed that the average person 65 years old or over had more than 65 days of disability per year -- more than twice the amount of the next highest age group, 45-64 years. The leading causes of disability among the elderly are diseases of the heart and blood vessels, arthritis and rheumatism, high blood pressure, stroke, and the aftereffects of accidents.(5)

It is not anticipated that health needs of the elderly will be significantly reduced by 1975. While the proportion of the population 65 years and over may decline slightly -- from an estimated 8.6 percent in July 1965 to an estimated 8.3 percent in July 1975(6) -- medical care requirements may actually increase. Medical advances will enable persons with health needs to survive who would formerly have succumbed. And public expectations and demands for health care will almost certainly continue to rise.

The opposite end of the age continuum also has distinctive health risks. Infant mortality, defined as deaths under one year of age, was 22.3 per live births in

California in 1963, slightly lower than the national rate but higher than that in several other states and countries.(7) Some of these infant deaths could have been prevented by the application of current medical knowledge and, assuming that good quality medical care becomes more nearly universally accessible and used, the infant mortality rate in California may continue to decline in the next decade.

In all the age groups from 1 to 34, accidents are the leading cause of death. Over half of all deaths among persons aged 15-24 years, for example, are the result of accidents -- mostly motor vehicle accidents.(8)

In the age groups above 35 years, diseases of the heart are the leading cause of death and cancer is second.(9) Death rates from cancer have declined somewhat in recent years, probably due primarily to emphasis on early diagnosis, but the "breakthrough" is still awaited. It is possible that death rates from the chronic diseases may be further reduced in the young adult and middle-age groups, but remain relatively elevated in the older groups.

Sex

For as long as accurate vital statistics have been maintained, the death rate has been higher for males than for females. In 1963, in California, it was 956 per 100,000 for the male population, 716 for the female -- a more than one-third "excess" for males.(10) As a corollary, life expectancy is substantially longer among women than men. The most recent California data show that life expectancy at birth is 74.5 years for females and 67.6 years for males.(11) It is debatable how much of this difference is due to physiological and how much to environmental factors. Whatever the reason or reasons, they will almost certainly be operative in 1975 as they are today. Both sexes will probably live longer than they do today, but females will continue to outlive males -- although at a decelerating rate of increase. Barring an imbalance in the sex ratio of in-migrants, the proportion of females in the population will gradually increase. This will have an effect on medical care requirements, because in most measurements of morbidity and medical care utilization females have the higher rates. The California Health Survey found the average male had 21.8 days of disability per year, the average female 26.0.(12) Males saw a doctor, on the average, 4.5 times a year; females 5.8 times.(13) The factors which produce these differences are not as yet well understood; it is unlikely they will change significantly by 1975.

Race

Differences in health status between the races are statistically highly significant. In California, particular attention should be paid to the factor of race, as the state's racial distribution has shifted considerably since 1940. The nonwhite population, mainly Negroes, has increased in California over the past 25 years.

In 1960, 8.0 percent of the population of California was nonwhite: Negro, Japanese, Chinese, Filipino, American Indian and a scattering of others.(14) (Persons of Mexican ancestry are classified as whites and are discussed below as an ethnic group rather that a race.) If the forces at work between 1940 and 1960 continue, the proportion of nonwhites will gradually increase. But racial composition is contingent not only on birth rates, which are relatively predictable, but also upon more imponderable factors such as changes in immigration patterns, political and economic developments in the American South.

The health status of Orientals is in some respects better than that of whites, but in virtually every important respect the health status of Negroes is depressed. For example, the infant mortality rate is more than 50 percent higher among Negroes than whites.(15) The maternal death rate is more than three times as high among Negroes as among whites.(16)

However, with the exception of some relatively esoteric diseases, such as sicklemia, almost none of this adverse experience is the result of race in its biological aspects. The inferior health status of Negroes is the result of race as a sociological phenomenon -- or, more precisely, of racial discrimination, with its effects on housing, education, income, and the like. The question of the health status of Negroes in California in 1975, therefore, does not turn as much on demographic or medical projections, as on projections of social and economic opportunities which reflect public and political attitudes. It seems plausible to anticipate that the gap between Negro and white health needs will continue to narrow as it has for the past several decades, but that it will not have closed by 1975.

Ethnic Group

There is, in California, a very large ethnic group which tends to have health problems beyond those of the population as a whole. This group is sometimes identified as "persons of Spanish surname." For all practical purposes, it consists of persons of Mexican descent. As in the case of Negroes, there is little if anything in these persons' biological inheritance which predisposes them to health problems. The problems are compounded of social prejudice; concentration in agricultural and other low-paying jobs; inferior housing; language barriers; poor education; and differential cultural values, such as attitudes toward planning, prevention -- and, indeed, the very meaning of health and illness.

Few indices of health status are available for this ethnic group. One may only infer, for example, that the high infant mortality rates in Tulare and Kings Counties, for example, reflect high infant mortality rates among persons of Mexican extraction.(17) For reasons not well understood, the lung cancer death rate among women who reside in California but were born in Mexico is strikingly high.(18)

By 1975, the "culture gap" may be substantially reduced, particularly as Mexican-Americans become more politically articulate and demand economic and social equality. A factor unique to this ethnic group, however, is its proximity to the ancestral homeland. This situation is complicated by the tradition of a more or less "open border," which tends perennially to infuse the "Spanish-speaking community" with more newcomers than is true of any other ethnic group, and thus retard assimilation. It is commonplace for agricultural laborers with visas to work in California for six months and live in Mexico the other six months; and it is commonplace for Mexican-American women in border areas to live on the Mexican side but cross to the U.S. side to have their babies. Dealing with the health problems of this particular group, therefore, involves sociocultural and economic changes not only in California but in Mexico as well.

Occupation

Shifts in production, distribution and demand for goods always have a residual impact on human health. In California, increased industrialization and mechanization have accentuated the influence which occupation, environmental exposures, and "improvements" in life exert upon the health of Californians. After-effects of change are seldom immediately noticeable. As a rule, only after long periods of time is it possible to recognize and assess either the adverse or favorable manifestations of change.

For example, the extent to which coronary heart disease and other leading causes of death and disability are related to the stresses and strains of different kinds of work remains largely hypothetical. But in some ways it is clearly and directly demonstrable that occupation affects health status and the need for medical care. In California, in 1963, 172,508 on-the-job injuries caused absence from work for a full day or more beyond the day of the injury; 967 work injuries were fatal; and 18,060 cases of occupational disease were reported.(19)

There are wide differences between occupational groups. Work injury rates are highest among construction, mine, and agricultural workers.(20) Occupational disease (as distinguished from injury) rates are far greater among agricultural workers than among any other type of workers.(21) The use of pesticides, one of life's "improvements," produced 746 cases of poisoning in 1963.(22) Since 1951, 120 deaths have been attributed to the use of agricultural chemicals.(23)

It should be noted that occupational injury and disease statistics are based on reports filed with the Division of Labor Statistics and Research of the California State Department of Industrial Relations. Among other things, they vary with the degree of workers' sophistication about their rights and employers' sophistication about their responsibilities.

Reported industrial accident rates have remained relatively constant in California for a number of years. This does not imply that industrial safety programs are ineffective; it could mean that social insurance programs are becoming more effective. This trend could continue, particularly in agriculture, where workers became covered only recently and probably tend to be comparatively uninformed about workmen's compensation and disability insurance programs. On the other hand, automation may materially reduce the occupational injury rate in some types of manufacturing. Injury rates are nearly three times as high among blue collar workers as among white collar workers.(24)

Region

While all of California has grown in population, increased population has concentrated in urban areas and immediately adjacent suburbs.

Crude death rates in California range from 5.9 per 1,000 population in Orange County and 6.0 in Contra Costa County to 14.7 in Lake County and 14.9 in Nevada County.(25) However, this measurement by itself is virtually meaningless. Only 5.5 percent of Contra Costa County's population are 65 years of age or more and 6.6 percent of Orange County; whereas 15.4 percent of the people living in Nevada County and 19.9 percent of those in Lake County are 65 years and over.(26)

Similarly, interpreting infant mortality rates by region is of limited value: In 1963, there were 29.6 infant deaths per 1,000 live births in Shasta County but only 16.7 in Marin County;(27) there is nothing intrinsic to Shasta County which causes infant deaths. The relevant variables here are not inherent and immutable, but social and economic, and hence amenable to change.

Since this entire document is intended to deal with "urban health requirements," it would be desirable to dwell at length on the health status and problems of urban versus rural-dwellers. Unfortunately, however, the amount of valid information on such differences is rather scant.

To be of any real value, data must not only be age-adjusted but controlled for differences in population characteristics such as sex and race.

Another element is residential history. A person may live all of his life on a farm, retire, begin suffering from a chronic condition, move to San Francisco in order to have access to specialists, and die in San Francisco. Even though 75 of his 76 years may have been spent in a rural area, his official residence at death is in the city -- and that is where he appears in the data. It works the other way, too. Some elderly persons move out of large cities to places like Santa Cruz and Lake Counties, because the cost of living is lower.

Study of the long-term effects of "urbanness" (e.g., air pollution, stress and strain, etc.) must take into account the individual's total residential history -- a vastly complicated research design.

Education

There is a pronounced positive correlation between years of school completed and income; and income has been shown to be inversely correlated to health needs (see Income). Education also influences health status through awareness of and application of dietary and hygienic principles. The less-educated tend to use their resources less effectively than those with more education and the same amount of resources. Thus, one mother may buy soft drinks for her children but another mother, with the same amount of money, may buy milk.

Knowledge of health programs may also be regarded as a form of education in the broad sense. A recent survey revealed that many persons under the Old Age Security program were uninformed or misinformed about the health benefits to which they were entitled.(28)

Educational levels are constantly rising in California, and will no doubt continue to do so. This suggests that greater use may be made of preventive health measures, including not only direct measures such as immunization but also indirect measures such as adequate diet. To this extent, greater diffusion of education would tend to result, in the long run, in less need for therapeutic medical services. But, on the other hand, enhanced education leads to increased ability to purchase medical care, and greater awareness of medical needs and possibilities. Health education can and should go on throughout life, fostered by any number of public and private agencies. It may be expected that education, in this broad sense, will lead to higher rates of utilization of goods and services by Californians in the years ahead.

Income

There was a time when people spoke of "diseases of the poor," such as pellagra, and "diseases of the rich," such as gout. As our society has tended to become more egalitarian, those sharp distinctions in disease entities have tended to fade. But taking the burden of death and disability as a whole, it is distributed unevenly along the income continuum.

The relationship between income and health needs has been clearly established in a number of studies.(29) The poor tend to have more disabling sickness and higher death rates. Until fairly recently, it could also be said that the poor had the most unmet health needs, but the situation is no longer clear-cut in that respect, at least in California. Since 1959, recipients of categorical public assistance (aged, blind, totally disabled and needy children) have been entitled to outpatient health care, with relatively few restrictions, under the Public Assistance

Medical Care program. Since 1962, the elderly poor have also been entitled to generous inpatient services under the Medical Assistance for the Aged program. In 1966, the California Medical Assistance program replaced PAMC and MAA health benefits with a broadened and strengthened program.

Persons on general (as distinguished from categorical) public assistance are still dependent for both their outpatient and inpatient medical care upon the institution of the county hospital. Some county hospitals are of the first rank. Some are not. Taken as a whole, patients in county hospitals appear to fare less well than patients in private hospitals with the same conditions. For example, the age-adjusted five-year survival rate for males with cancer is 41 percent in voluntary hospitals, 23 percent in county hospitals; for females, 52 percent in voluntary hospitals, 29 percent in county hospitals.(30) The California Medical Assistance program may, in time, have the effect of reducing such differences, especially as county hospitals are integrated as community hospitals.

In some ways, the income group with the greatest health and medical problems is probably the lower-middle: ineligible for any of the tax-supported programs which cover the medically indigent, but often faced with serious difficulty in purchasing fee-for-service medicine -- particularly if the family is large and if the needed medical service is major. Health insurance has helped to mitigate this problem, but there are probably still some hundreds of thousands of lower-middle income Californians who, for all practical purposes, are unprotected by health insurance.

MEDICAL CONDITIONS

This discussion treats, in sequence, those medical conditions which are, numerically, the leading causes of death in California. Despite heightened technology, projection of reduced rates from many of these conditions would depend on increased awareness and application of preventive measures, as well as greater access to medical care.

Diseases of the Heart

Nearly 40 percent of all deaths in California are from this group of conditions, the largest of which is coronary heart disease.(31) Some of these deaths are probably preventable, at least in theory. For example, in 1963, 3,183 California men under the age of 55 died from coronary heart disease (involving coronary arteries), as compared to only 568 women -- a ratio of more than five to one.(32) There are two schools of thought about this striking difference. One theory points to the possible role of biological (hormonal) differences between the sexes. To the extent that this theory proves valid, much coronary heart disease might be prevented, or at least controlled, biochemically. The other major theory hypothesizes that there are factors in the life-style of men in our

society which are conducive to coronary heart disease. Epidemiological studies are underway designed to identify these factors and suggest possible controls. The controls, however, might be exceedingly difficult to carry out as they might well require profound changes in institutionalized practices such as earning a living or family relationships.

Studies have disclosed that a significant amount of heart disease is associated with cigarette smoking.(33) Control of smoking habits may eventually reduce a certain amount of heart disease mortality.

Malignant Neoplasms

One-sixth of all California deaths are from cancer. For some types of cancer, medical science has not yet developed an effective answer. For others, however, present medical competence, if systematically applied through early detection and treatment, could significantly reduce disability and deaths from cancer. For example, cervical cancer killed 671 California women in 1963 -- most of them under the age of 60.(34) The Papanicolaou smear test, if extended to all women, could well be the means for eliminating cervical cancer as a cause of death. But, as recently as 1962, only about half the women in Alameda County reported ever having a "Pap" test.(35)

There is also a known means to prevent most of the deaths from the leading type of fatal cancer. Lung cancer killed 4,045 persons in this state in 1963, far more than cancer of any other body site.(36) The great majority could have been prevented by abstinence from cigarette smoking. The future status of this form of preventive medicine, like many others, seems to depend more on political, psychological, and sociological changes than upon medical advances.

Vascular Lesions Affecting the Central Nervous System

These pathologies of the blood vessels in the brain are commonly known as "strokes." Not only are they the third leading cause of death, but they are also a major cause of partial or total disability. It is estimated that, by 1975, a total of 55,000 Californians will have survived cerebrovascular accidents, but with some residual impairment.(37) The prospects for positive prevention of this cause of death are not encouraging, but advances in rehabilitation may well reduce the burden of disability.

Accidents

Nearly 9,000 Californians lose their lives annually through accidents and, if this rate continues, the number will rise to 12,000 by 1975.(38) Of the total, approximately half are motor vehicle accidents. Other common types of fatal accidents are falls, fires, drowning, aircraft accidents, and poisoning.(39) In addition,

accidents are a major source of nonfatal injuries and disability. A collaborative study by the Home Safety Project and the California Health Survey revealed an accident rate of 708 per 1,000 persons per year, of which 20 percent were disabling. Fully half of these nonfatal accidents occurred in the home.(40) Among all acute and chronic conditions, accidents were the third leading cause of disability, following upper respiratory infections.(41)

Accident studies and preventive programs are presently fragmented between many public and private agencies and, in the aggregate, receive only a minuscule proportion of resources devoted to health problems. Unless there is greatly heightened interest in this subject, it may be anticipated that accidents will continue to take the lives of more young Californians (ages 1-34) than any other cause, and continue to account for nearly two days of disability per person per year.

Diseases of Early Infancy

Four percent of total California deaths occur among the newborn. Death may result from birth injuries, pneumonia, postnatal asphyxia, erythroblastosis (Rh factor), and a number of other conditions which are likely to prove fatal in the first few days, hours, or even minutes of life. About half of these deaths are attributable to prematurity.(42) Relatively little is known about the mechanisms which induce premature delivery, and medical science can do relatively little more to keep premature infants alive than was true fifteen years ago. A recent study by the Bureau of Maternal and Child Health found the prematurity rate and the survival rate among premature infants to be strikingly stable. In 1949, 7.5 percent of all births were premature (defined in terms of birth weight); in 1959, 7.8 percent. In 1949, the survival rate of premature infants was 75.1 percent; in 1959, 74.6 percent.(43)

There is nothing to indicate that this health problem will be solved in 1975, and hence diseases of the newborn will probably continue to rank high among causes of death in California.

Pneumonia

This category excludes pneumonia of the newborn, which is classified with other diseases of the newborn, and excludes chronic interstitial pneumonia, which is discussed below under Chronic Respiratory Diseases.

Bacterial pneumonia, which used to kill many people, has been largely controlled by antibiotics. Most of the pneumonia which remains is of two types. In some cases, a fulminating, overwhelming respiratory infection strikes at a time and place where medical care is not readily available or sought, and the victim is dead within a few hours. More commonly, pneumonia is the final stage in respiratory insufficiency from asthma, bronchitis, emphysema or other chronic condition.(44)

Furthur reduction of pneumonia deaths appears largely contingent on possible reduction of emphysema and the other chronic respiratory diseases, discussed below.

Cirrhosis of the Liver

Cirrhosis of the liver results from malnutrition, infectious hepatitis and other causes, and is not necessarily associated with alcoholism. In the United States as a whole, only one in four death certificates which ascribe death to cirrhosis of the liver mentions alcoholism.(45) In California, this proportion is one in two, but it seems almost certain that alcoholism is underreported, either because the certifying physician is trying to protect the family or because he is not familiar with the drinking history of the decedent.

Studies by the Division of Alcoholism, State Department of Public Health, indicate that the mortality experience of alcoholics is generally adverse. For example, a five-year follow-up study of 1,346 persons who had been treated in alcoholic clinics revealed a known death rate of 26.1 persons per year (not counting deaths that occurred among persons lost to follow-up), compared to an expected rate of 11.0.(46) In addition to cirrhosis of the liver, alcoholism appears to be contributory to deaths from accidents, vascular lesions of the central nervous system, heart disease, tuberculosis and suicide.

In addition to deaths among persons who are themselves excessive drinkers, a substantial number of motor vehicle deaths (see Accidents) are the result of accidents to innocent second parties caused by drunk drivers.

Alcoholism is a serious health problem in California, and the prognosis is not good. Treatment is slow, expensive, uncertain, and unlikely to reach all who need it. Prevention would require profound changes in our understanding and attempted reconstruction of society and its discontents. California in 1975 may well be more populous, prosperous and fast-moving -- and more than ever afflicted by "social pathologies." (See also Suicide, Stomach Ulcer and Homicide, below.) However, social awareness of the problem is increasing, as indicated, for example, by the activities of the Division of Alcoholism.

General Arteriosclerosis

This condition is familiarly known as "hardening of the arteries." Most of the coronary heart disease, already discussed as the leading cause of death, is a particular form of arteriosclerosis involving the arteries supplying blood to the heart muscle. Many cerebrovascular accidents are secondary to hardening of the arteries. Lesions in other parts of the arterial system are classified here as general arteriosclerosis.

General arteriosclerosis rates might theoretically be reduced somewhat through changes in our way of life, but whether these changes are a practical possibility is another matter.

Suicide

Suicide is the ninth leading cause of death (eighth for men), even when it is narrowly defined. In a broad sense, alcoholism and, in some cases, accidents and homicides might also legitimately be considered as suicidal. No one seems even to have attempted to estimate the amount of suicidal "morbidity" -- the human wastage resulting from essentially the same kinds of despair which in extreme cases lead to final destruction.

In terms of sheer numbers, suicide is an important health problem: over 3,000 Californians take their own lives every year, and uncounted others brood upon the possibility.(47) Short of greatly heightened social concern, knowledge, and fundamental reconstructive action, one can only anticipate that suicide in both its ultimate and "subclinical" forms will continue to rank high among California's unsolved health problems for the indefinite future.

Other Diseases of the Circulatory System

This is a residual category, exclusive of the heart disease and other classifications already discussed. It includes such conditions as aortic aneurysm and pulmonary embolism. These are very largely conditions of old age, and seem unlikely to be significantly reduced in the coming decade.

Congenital Malformations

Not to be confused with birth injuries, discussed earlier, congenital malformations are "nature's errors" which occur in utero. The great majority are expelled from the uterus before term: they are known as miscarriages or spontaneous abortions if occurring under 20 weeks of gestation (no records are kept of these) or fetal deaths ("stillbirths"), which must be registered, if occurring after 20 or more weeks of gestation. When infants survive long enough to be classified as "live births," subsequent deaths from congenital malformations are included among general death statistics.

Medical science is increasingly able to keep the congenitally malformed alive, but usually unable to prevent the malformations from occurring in the first place, so it is possible that this cause of death and disability will, if anything, increase in relative importance in the years ahead. Some congenital malformations will presumably be prevented through the use of a vaccine against rubella ("German measles"), currently being explored.

Diabetes Mellitus

This disease is not preventable, but with present medical knowledge its effects can usually be controlled, and the patient can lead a productive life for long periods of time. It is one of the few leading causes of death for which the female rate exceeds the male. With more public education and early diagnosis, the present death rate could probably be somewhat lowered. With continuing research, the genetic and etiologic enigmas of diabetes may be breached, but the "breakthrough" is not immediately in sight.

Chronic Respiratory Diseases

There is an increasing tendency to combine statistically a group of conditions which often occur in combinations with each other and which are sometimes difficult to diagnose differentially. They include asthma, chronic bronchitis, pneumoconiosis, chronic interstitial pneumonia, bronchiectasis and emphysema. Of these, emphysema is of the greatest interest, for the death rate from this cause has risen dramatically from 1.5 in 1950 to 11.1 in 1963[48] -- and is continuing to rise each year.

Taken as a group, the chronic respiratory diseases account for nearly 3,000 deaths a year in California.[49] In addition, the Bureau of Chronic Diseases estimates that about 670,000 Californians suffer some degree of disability from chronic respiratory conditions, and over 2,000,000 Californians have a chronic cough, shortness of breath, or some other symptom or symptoms commonly associated with these conditions.[50]

It has been hypothesized, but not as yet proved, that air pollution may be linked with the increase in chronic respiratory conditions. It seems even more probable that cigarette smoking is implicated.[51] Even if a massive preventive program were launched immediately, deaths and disability from these diseases might well continue to increase over the next 10 years, because the effects of smoking and other exposures reflect long-term practices. The remarks above concerning prevention of lung cancer apply here as well.

Ulcer of Stomach and Duodenum

Gastric and duodenal ulcers kill well over a thousand Californians yearly -- nearly 70 percent of them males.[52] The California Health Survey found a morbidity rate of 13.2 cases of ulcer per 1,000 population.[53] Applied to the present population of the state, this would yield more than 200,000 persons with these types of ulcers. (Jejunal and esophagal ulcers are relative rarities.)

The etiology of ulcers is not clearly established. Some have postulated a heredity factor. There is a statistical association with certain somatotypes (body

build). There is also a statistical association with cigarette smoking and with emotional stresses and tensions. To the extent that environmental factors are causative, ulcers might be considered one of the "social pathologies," along with others that have been discussed. The prognosis, then, has to be much the same.

Communicable Diseases

In theory, almost all deaths from communicable diseases are "preventable," if current epidemiological knowledge could be perfectly applied. Part of the problem, perhaps, is that people have been lulled by such spectacular successes as the polio vaccine, have assumed the battles are won, and have relaxed. But in 1963, 1,419 Californians died from communicable diseases.(54)

The most important communicable disease, from the standpoint of mortality, is tuberculosis. After declining for many years, tuberculosis has levelled off in California, both in terms of deaths (about 600 per year) and new cases reported (about 4,250 per year).(55) But this battle is by no means won. Reactivation of old cases and drug resistance of tubercle bacilli contribute to the current stasis.

The second most common communicable disease, in point of mortality, is syphilis, which killed 221 Californians in 1963.(56) Venereal disease morbidity rates appear to be increasing, particularly among teen-agers.(57) Control programs, as in the case of the "social pathologies," would seem to lie more in the modification of psychological and cultural tendencies than in medical technology.

A number of communicable diseases figure insignificantly in death rates, but very significantly in disability rates. The single entity which causes more days of disability than any other in California is the common cold.(58) There is a possibility that the incidence of the common cold may be reduced in the future by the development of a multiple vaccine. Measles, the most important of the childhood diseases, could be largely prevented by the widespread use of a vaccine already available. There is also a vaccine currently available which has had encouraging success against certain strains of influenza.

Homicide

In 1963, 722 Californians died from violence purposely inflicted by other persons. (This figure includes police activities and legal executions but does not include war deaths.)(59) Intentional violence which results in injury but not in death is nowhere reported in a systematic manner. Arrests for assault and battery are available from police, and records on convictions are available from the courts, but these are far removed from meaningful morbidity data. Very little is known, for example, about injuries from wife-beating and child-beating.

To date, deliberate mayhem and deaths have been viewed as a penological rather than public health problem. Perhaps by 1975 more serious attention will have been turned to a scrutiny of the factors which impel men to commit violence upon other men -- a necessary beginning for any ameliorative action.

Chronic Conditions Not Elsewhere Classified

The major killers among chronic diseases have already been discussed. There are a number of others which, while not usually fatal, account for a heavy burden of disability in California. Chronic conditions cause over twice as many days of disability as acute conditions.(60)

The California Health Survey found that arthritis and rheumatism account for 1,400 days of disability per 1,000 persons per year, third only to colds and accidents as a source of disability.(61) Present medical developments do not suggest that by 1975 arthritis and rheumatism can be prevented or cured, but it is likely that rehabilitative techniques will have been improved.

Other significant chronic conditions, with disability rates found in the California Health Survey, include: back conditions (880 days per 1,000 persons per year); other muscle, bone and joint involvement (760); hypertension without heart involvement (710); blindness and other eye conditions (550); mental disturbances (400); migraine and headache (290); deafness and other ear conditions (270); skin conditions (240).(61) Much of this disability has an organic basis and is amenable to surgery or chemotherapy to the extent it is reversible at all. But much, it should be noted, is psychogenic -- and to that extent may be classed with the "social pathologies" discussed above.

SUMMARY

It seems reasonable to predict that by 1975 California health problems stemming from outright deprivation of one kind or another, while not eliminated, will have been markedly reduced. Educational programs will have reduced ignorance and superstition; "antipoverty" and related programs will have reduced material want; social and legal forces of various kinds will have reduced housing segregation and other manifestations of racial and ethnic bias. Access to high quality medical care through prepayment mechanisms or tax-supported programs will be more nearly universal. Many persons currently outside the mainstream of medical care by dint of cultural factors, psychological inhibitions, unawareness of their own needs, or unawareness of health resources available to them, will be brought within the mainstream. In these respects, it may be anticipated that California's health will be improved in the decade ahead.

The geometric progression of scientific knowledge and technical application stimulates hope of "breakthroughs" in the dimension of health as well. Perhaps the

virus theory of cancer will bear fruit; perhaps noncarcinogenic cigarettes will be developed and properly accepted. If so, some thousands of lives may be saved each year.

However, optimism must be tempered, whether pursuing the axis of demographic analysis or that of biostatistical classification. Many population groups with special health problems will have them still in 1975. The newborn will still have particular problems; so will the aged. Men will still have particular problems; so will women.

In 1975, the leading causes of death and disability will probably still rank in very much their present order. Possibilities for significant change lie largely in the "social pathologies," but they presuppose shifts in social values and structuring of a fundamental character which few societies have ever experienced in a period as brief as ten years.

The reasons why some Californians drink alcoholic beverages to excess, smoke cigarettes, smash automobiles, get into other types of accidents, commit suicide, commit murder, become tense and miserable and desperate, are all too likely to be present in 1975 -- and, in fact, barring some basic social-psychological reconstruction for which there is no general consensus at present, the underlying causes of the "social pathologies" may be even deeper and stronger than they are today.

Some improvements in personal health may be perceptible, despite "social pathologies," if existing medical care becomes recognized, accepted and applied by individuals beyond the mainstream of medical care. In fact, if growth and continuity of appropriate services fail to anticipate heightened demand, the quality and capabilities of medical care may diminish.

Chapter 3

UTILIZATION OF PERSONAL HEALTH SERVICES

Planning of health services for Californians should involve a serious examination of the current scope of personal health services, patterns of utilization, projections, and an understanding of economic factors. This chapter discusses in detail the major sources of personal health services available and used by Californians: the services of physicians, dentists and paramedical personnel; institutional services found in various types of hospitals and long-term care facilities; those services capable of being delivered at home; and the use of drugs and appliances supportive to medical care.

PHYSICIAN SERVICES

The planning and availability of physician services in California will depend on several factors, including the total number of physicians, their distribution, type of practice, the manner in which medicine is practiced and methods of payment. Population and economic considerations will also influence physician services.

The most current inventory of physicians was published in January 1965 (see Table 1). At that time, 31,396 doctors of medicine were in California: 22,674 were in active private practice (individual, partnership or group practice, physicians employed on salary); 2,244 were retired or not in active medical practice. About one-fifth, 6,458, were in training programs on hospital staffs, medical teaching, medical administration, preventive medicine, laboratory medicine or research. Not included in Table 1 are an estimated 2,400 physicians employed by the Federal Government. Of the nearly 34,000 physicians in California, only a few are not providing some personal health services. General practitioners comprise about one-third of those in active practice; internal medicine, general surgery, obstetrics and gynecology, psychiatry, and pediatrics are successively the most common specialties.

In 1963, nearly half of the physicians in California actively engaged in medicine reported income from fees-for-service obtained through individual practice (49.0 percent); 27.2 percent were on full-time salaries; 14.5 percent obtained income from fees-for-service within a group or partnership. Less than 10 percent received income from both fees and part-time salaries. The rather high proportion of physicians on full-time salaries reflects in part those physicians employed by the Federal Government.(62)

Table 2 indicates the ratio of physicians to population. California's ratio has, for the past decade, exceeded that of the United States as a whole -- currently 132 nonfederal physicians to 100,000 civilian population. Some of the differences

Table 1

DISTRIBUTION OF PHYSICIANS BY SPECIALTY AND TYPE OF PRACTICE
CALIFORNIA, JANUARY 1965

PRIMARY SPECIALTY[1]	TOTAL	PRIVATE PRACTICE					NOT IN PRIVATE PRACTICE									
		Total	Under 65		65 and Over		Total	Intern in Hospital Service	Resident or Fellow in Hospital Service	Other Full Time Staff in Hospital Service	Full Time Medical School Faculty	Administrative Medicine	Laboratory Medicine	Preventive Medicine	Research	Retired	Not in Practice
			Full Time General or Specialty Practice	General Practice With Some Specialty Practice	Full Time General or Specialty Practice	General Practice With Some Specialty Practice											
Total	31,396[a]	22,674	18,594	2,297	1,453	330	8,722	871	2,305	1,223	715	279	153	651	281	1,764	480
Unspecified[2]	3,154						3,154	764			36	40		2	27	41	1,764	480
Administrative Medicine	280						280					1	279					
Allergy[3]	96	89	79		10		7		5					1	1			
Anesthesiology	1,200	1,007	979		28		193		119	38	31			2	3			
Aviation Medicine[4]	35	9	8		1		26		4	3	1			6	12			
Cardiovascular Disease[3]	172	122	106		16		50		14	5	17			1	13			
Child Psychiatry[5]	80	36	35		1		44		30	8	5			1				
Diagnostic Roentgenology[6]	9	6	6				3		2	1								
Dermatology	464	405	374		31		59		36	5	13		1	2	2			
Forsensic Pathology[7]	6	1			1		5			1			3	1				
Gastroenterology[3]	33	24	23		1		9		4		4				1			
General Practice	8,018	7,707	4,507	2,297	573	330	311	12	81	141	5			64	8			
General Surgery	2,430	1,947	1,839		108		483	27	303	91	40			14	8			
Internal Medicine	3,819	2,973	2,808		165		846	45	383	173	137		6	44	58			
Neurological Surgery	230	184	177		7		46		33		11				2			
Neurology	164	91	84		7		73		28	16	23		1		5			
Obstetrics and Gynecology	1,757	1,481	1,399		82		276	1	191	35	37			8	4			
Occupational Medicine[4]	161	44	34		10		117		2	2	5			104	4			
Ophthalmology	938	827	745		82		111		80	10	11			3	7			
Orthopedic Surgery	962	813	773		40		149		111	17	13			4	4			
Otolaryngology	567	504	428		76		63		43	6	7			6	1			
Pathology	715	310	302		8		405	4	144	53	54		134	3	13			
Pediatrics	1,592	1,152	1,109		43		440	18	139	107	74			75	27			
Pediatric Allergy[8]	5	4	4				1				1							
Pediatric Cardiology[8]	14	5	5				9		1	6	2							
Physician Medicine and Rehabilitation	83	43	37		6		40		7	14	16			2	1			
Plastic Surgery	149	134	128		6		15		8	4	2				1			
General Preventive Medicine[4]	81						81		1	5	9			61	5			
Colon and Rectal Surgery	104	102	84		18		2			1				1				
Psychiatry	1,933	1,178	1,131		47		755		331	304	66			41	13			
Public Health[4]	180						180		6	4	4			164	2			
Pulmonary Disease[3]	77	42	40		2		35			27			1	6	1			
Radiology	1,041	776	742		34		265		117	84	53		3	2	6			
Therapeutic Radiology[6]	8	6	6				2		1					1				
Thoracic Surgery	150	128	128				22		11	5	6							
Urology	553	468	425		43		85		62	12	8			1	2			
Other[9]	136	56	49		7		80		8	9	19		2	6	36			

1 The Recognized Specialty Field to which the physician devotes his major interest.
2 Retired, not in practice, no specialty reported.
3 Subspecialty of Internal Medicine.
4 Special field of Preventive Medicine.
5 Subspecialty of Psychiatry.
6 Special field of Radiology.
7 Special field of Pathology.
8 Subspecialty of Pediatrics.
9 Specialty not recognized.

[a] Exclusive of physicians in federal service.

Source: American Medical Association, Volume 16, Supplement No. 104. (Unpublished Data)

in urban and rural ratios may be attributed to the presence of specialized training institutions and the concentration of specialized practitioners customarily found in metropolitan areas.

Table 2

ESTIMATED PHYSICIAN/POPULATION RATIOS
(MEDICAL DOCTORS ONLY), CALIFORNIA
SPRING 1963

RATIO	STATEWIDE	METROPOLITAN AREAS[1]	NONMETROPOLITAN AREAS[2]
	(Per Hundred Thousand)		
All Physicians/Total Population	181	190	123
Nonfederal Physicians/Civilian Population	171	na	na
All Practicing Physicians[3]/Total Population	169	178	113
Nonfederal Practicing Physicians[3]/ Civilian Population	159	na	na

na Not available.

1 Includes the following counties: Alameda, Contra Costa, Fresno, Kern, Los Angeles, Marin, Orange, Riverside, Sacramento, San Bernardino, San Diego, San Francisco, San Joaquin, San Mateo, Santa Barbara, Santa Clara and Solano.

2 Includes all other California counties.

3 Excludes Retired and Not in Practice.

Sources: U.S. Bureau of the Census, Current Population Reports (figures adjusted by California Medical Assn., Bureau of Research and Planning).

California Economic Development Agency, California Statistical Abstract (figures adjusted).

Special tabulations of physicians supplied to the California Medical Assn., Bureau of Research and Planning, by American Assn., appearing in Socio-Economic Report 3. San Francisco, August 1963, p. 6.

Licensure has generally increased in recent years, though not consistently. In 1964, 2,540 new physicians received licenses to practice in California.(63)

Utilization Trends

Californians contact physicians more frequently than the average citizen of the United States. Rates in the last decade were 5.95 visits or contacts with physicians per person per year for Californians, compared with 5.01 visits and contacts for the United States, per person per year.(64)

Office Visits: The number of visits to the physician's office is substantially higher in California than for the nation as a whole: 4.1 per person per year in California, 3.3 in the nation.(65) Table 3 illustrates utilization by age and sex.

Table 3

OFFICE VISITS BY AGE AND SEX
CALIFORNIA, OCTOBER 1957-SEPTEMBER 1958
AND UNITED STATES, JULY 1957-JUNE 1959

(Figures are subject to sampling variation)

AGE AND SEX	RATE[1]		INDEX[2]
	California	United States	
All Ages	4.10	3.30	1.24
0-4	4.35	3.45	1.26
5-14	2.71	2.09	1.30
15-24	3.94	3.06	1.29
25-44	4.62	3.59	1.28
45-64	4.39	3.82	1.15
65 and Over	4.75	4.07	1.17
Male	3.51	2.82	1.24
0-4	4.54	3.52	1.29
5-14	2.73	2.16	1.26
15-24	2.36	2.12	1.12
25-44	3.32	2.72	1.22
45-64	4.24	3.27	1.30
65 and Over	4.26	3.78	1.13
Female	4.66	3.75	1.24
0-4	4.16	3.37	1.24
5-14	2.70	2.03	1.33
15-24	5.25	3.88	1.35
25-44	5.79	4.40	1.32
45-64	4.53	3.34	1.04
65 and Over	5.14	4.31	1.19

[1] Per person per year.
[2] California rate divided by United States rate.

Sources: U.S. National Health Survey, Volume of Physicians Visits United States July 1957-June 1959. Health Statistics, Series B, No. 19, Table 15, p. 24, and Table 27, p. 36.
State of California Department of Public Health, Bureau of Chronic Diseases. California Health Survey. 1954-1955.

Other studies of selected groups, such as the State Employees' Retirement System Health Insurance Survey, indicate active state employees average 4.7 office visits per year, while their dependents (a group which may include any age but is composed primarily of children) have physician office visits on the average of 3.2 times per year. The annuitant group and their dependents, comprised largely of persons 65 years of age and over, see the physician in his office 5.4 visits per year.(65)

Wide variation in numbers of physician contacts by special groups, age, geographical area and availability of services, should be noted. For example, Old Age Security recipients over 65 in Santa Cruz County in fiscal year 1960-1961 had an average of 20 office visits per person per year.(66)

Data on number of visits to the physician's office for persons with special health problems are not available. However, since older age groups have more chronic disease, it would appear that perhaps some of the higher use of physician office services would be due to special health problems. For example, the California Health Survey found that 80 percent of persons with stated "heart conditions" saw a physician during the previous one-year period.(64)

Physician office visits will probably increase in future years, for several reasons: continuing education about health care and disease prevention; increasing public awareness and desire for medical care; increase of persons in the middle and older age groups; technological improvements in diagnostic and treatment services; increased coverage by health insurance; and increased coverage of hospital expenditures for certain groups by government, leading to greater utilization of physician office services.

Home Visits: While for all ages combined, Californians appear to have about the same amount of physician home visits as the nation as a whole, certain age-sex groups in California do show distinctive differences (see Table 4). For example, California men 65 years of age and over had about 60 percent more home visits than men that age throughout the nation; both men and women ages 45-64 experienced higher home visit rates in California. Among children, from infancy to 14, home visits were less frequent in California than in the nation as a whole, particularly among boys ages 5 to 14.

Home (house) calls for diagnostic purposes or initial examination may be expected to decrease, due both to the limited number of physicians available and economic considerations, and the fact that most diagnostic work is more readily performed in the office or hospital. The number of house calls for patients in convalescence or with chronic disease will probably increase to some extent. It is not clear whether the increase in the latter type of house calls will more than

offset the decline in diagnostic house calls. Persons with special health problems requiring bed care will receive more home calls in the future, especially when the care is associated with an organized program.

Table 4

HOME VISITS BY AGE AND SEX
CALIFORNIA, OCTOBER 1957-SEPTEMBER 1958
AND UNITED STATES, JULY 1957-JUNE 1959

(Figures are subject to sampling variation)

AGE AND SEX	RATE[1]		INDEX[2]
	California	United States	
All Ages	0.46	0.49	0.95
0-4	0.42	0.54	0.78
5-14	0.22	0.43	0.51
15-24	0.32	0.24	1.30
25-44	0.29	0.29	1.00
45-64	0.62	0.49	1.27
65 and Over	1.50	1.54	0.98
Male	0.43	0.40	1.09
0-4	0.49	0.54	0.91
5-14	0.19	0.43	0.44
15-24	0.20	0.16	1.26
25-44	0.20	0.20	1.03
45-64	0.51	0.39	1.32
65 and Over	1.92	1.18	1.63
Female	0.49	0.57	0.86
0-4	0.35	0.54	0.64
5-14	0.25	0.43	0.58
15-24	0.41	0.31	1.31
25-44	0.37	0.38	0.97
45-64	0.72	0.58	1.23
65 and Over	1.16	1.84	0.63

[1] Per person per year.
[2] California rate divided by United States rate.

Sources: U.S. National Health Survey, Volume of Physicians Visits, United States, July 1957-June 1959. Health Statistics, Series B, No. 19, Table 15, p. 24, and Table 27, p. 36.
State of California Department of Public Health, Bureau of Chronic Diseases. California Health Survey. 1954-1955.

Institutional Care by Physicians: Patient contacts with physicians also occur in hospital clinics, industrial health units, emergency rooms, voluntary health centers and public health clinics, though these are less numerous than physician

office visits. Californians use institutional physician services at a slightly higher rate than the United States as a whole: .77 compared to .70 visits per person per year (see Table 5).

Table 5

OTHER[1] PLACES OF PHYSICIAN VISITS BY AGE AND SEX
CALIFORNIA, OCTOBER 1957-SEPTEMBER 1958
AND UNITED STATES, JULY 1957-JUNE 1959

(Figures are subject to sampling variation)

AGE AND SEX	RATE[2]		INDEX[3]
	California	United States	
All Ages	0.77	0.70	1.09
0-4	0.92	0.88	1.04
5-14	0.57	0.49	1.17
15-24	0.67	0.88	0.76
25-44	0.84	0.67	1.26
45-64	0.75	0.77	0.97
65 and Over	0.94	0.66	1.43
Male	0.74	0.70	1.07
0-4	1.02	0.93	1.10
5-14	0.64	0.49	1.32
15-24	0.48	0.83	0.58
25-44	0.77	0.64	1.21
45-64	0.72	0.76	0.94
65 and Over	0.89	0.70	1.27
Female	0.79	0.71	1.11
0-4	0.81	0.84	0.97
5-14	0.50	0.48	1.02
15-24	0.83	0.93	0.89
25-44	0.91	0.70	1.31
45-64	0.78	0.79	0.99
65 and Over	0.98	0.63	1.57

1 Includes hospital clinic, industrial health unit, other and unknown.
2 Per person per year.
3 California rate divided by United States rate.

Sources: U.S. National Health Survey, Volume of Physicians Visits, United States, July 1957-June 1959. Health Statistics, Series B, No. 19, Table 15, p. 24, and Table 27, p. 36.
State of California Department of Public Health, Bureau of Chronic Diseases. California Health Survey. 1954-1955.

An increase in the number of visits to industrial clinics may be expected, due to heightened awareness, and the flourishing of preventive medicine programs and expanded medical services in industry. Hopefully, increased safety programs will reduce visits for accident treatment, thereby limiting industrial visits to a nominal increase overall.

The use of hospital clinic facilities may increase, being convenient for physician and patient. However, this could be offset by diminished routine visits to governmental clinics, a likely consequence of increased use of private physicians in welfare and other governmental programs.

The use of hospital emergency rooms for other than emergency care is increasing and will probably continue to increase unless administrative deterrents are developed. Some physicians now refer patients to these facilities after office hours, especially when specialized assistance is desirable or the patients are not known. The patient may find the emergency room convenient when services are desired after work or at other times. But these routine visits create staffing problems and lead to poor follow-up and fragmentation of medical care.

No specific information is available concerning physician visits to hospital patients. However, each patient in a hospital must be admitted and followed by a physician; thus, physician utilization is, in part, directly related to hospital admissions and length of stay.

Patients entering institutions licensed as nursing homes must also be admitted by and remain under the care of a physician. Specific recent data on the number of physician visits to nursing home patients are not available; however, one report indicates that only about 35 percent are seen at greater than weekly intervals.[67]

The number of public health clinic visits will probably decline with expanded welfare programs and their greater utilization of private physicians. Clinics operated by voluntary organizations may change their emphasis but can be expected to provide about their present level of service.

Projections: Precise predictions of the frequency of physician visits are not possible. From 1957 to 1964, the number of physician visits (excluding hospital visits) per person in the United States declined from 4.8 to 4.5.[68,69] But it is doubtful that there will be further decline as new programs, awareness of medical care and new technology will probably tend to more than offset this decline -- increasing the utilization to perhaps 5.0 visits per person per year in California.

One factor which may inhibit increased utilization of physicians is the very existence of medical manpower. As indicated in Table 2, the ratio of physicians to population is favorable in metropolitan areas, but less so in rural and semi-rural regions. While California enjoys significantly higher physician/population ratios, even in its more remote sectors, than the United States as a whole, the distribution indicates that substantial areas of the state are covered by fewer than 175 physicians per 100,000 population -- the recommended minimum.(70,71)

The ratio cannot be maintained in California, despite in-migration, unless definitive steps are taken in this decade to expand medical education. An estimated 44,300 physicians will be needed in 1975 to maintain the ratio of 175 per 100,000.(70) At least 725 new first-year places in medical schools were proposed in 1960 to meet the need not satisfied by in-migration. This would more than double the capacity of 500 places existing then in both private and public medical schools.(70)

To date, progress toward meeting the 1975 goal has been made, but not as rapidly as desired. Since 1960, the University of California Schools of Medicine at Los Angeles and San Francisco have increased their first-year places to 128 each; the new medical school at San Diego, with 100 first-year places, is in its fourth year of operation; California College of Medicine, a State-supported medical school converted from the California College of Osteopathy, has not been able to maintain its 1960 enrollment of 97 first-year places; and, as yet, not one of the potential privately-supported medical schools -- affiliated with Presbyterian Hospital in San Francisco, one of the Kaiser Foundation Hospitals, the City of Hope Hospital in Duarte, and the Pacific Foundation College of Medicine in Oakland -- has obtained essential financial backing. Some scholarship support of medical students has been expanded by recent legislation.

As of 1966, however, the medical education program advocated is already behind schedule. The consequences in 1975 will certainly mean a smaller ratio of physicians to population than 175 -- although how much smaller is not predictable.

Economic Aspects

As data for all of California are not available, information on expenditures is given for the nation as a whole, and for Los Angeles and San Francisco where available.

Total expenditures for physicians' services in the United States reached $28.38 per capita in 1961, up 73 percent from 1951, constituting approximately 25 percent of all medical care expenditures.(72) Private health expenditures in the

United States have been increasing, both as total dollars expended and proportion of disposable income. For example, per capita private expenditures for medical care increased from $52.79 in 1948 to $116.60 in 1961; moreover, such expenditures took 5.8 percent of disposable personal income in 1961 compared with 4.0 percent in 1948.(73)

During the decade 1952-1962, the Consumer Price Index discloses that the average retail price of an office visit by an adult to a general practitioner or internist rose from $4.17 to $6.33 in Los Angeles, and from $4.67 to $6.36 in San Francisco.(74) A "house" visit during the same period rose from an average of $6.25 to $11.11 in Los Angeles, and from $7.25 to $9.99 in San Francisco.(74)

Prepayment for health care is becoming an increasingly important factor of medical care in California. Prepayment is provided by three types of organizations: 1) the "Blues," which are sponsored by hospitals (Blue Cross) and medical societies (Blue Shield); 2) private insurance carriers; and 3) plans provided by private or consumer groups; medical societies other than Blue Shield; dental societies; employer or employee organizations; prepayment plans offered by physician-owned group medical clinics; and student health services operated by colleges and universities.

In 1948, in the United States, of total private expenditures for medical care, 88.8 percent were direct payment and 11.2 percent came from prepayment. But in 1961, direct payments accounted for only 68.4 percent of private expenditures; prepayment had increased to 31.6 percent.(73)

Physician services accounted for 29.5 percent of all private medical care expenditures in 1961 in the United States; similarly, about one-third of the total per capita prepayment premium was expended for physician services.(73) Data on cost per illness are not readily available.

HOSPITAL SERVICES

The Bureau of Hospitals of the State Department of Public Health maintains an inventory of hospitals and related facilities in California, and their capacities. Table 6 indicates for 1966 the number of licensed hospital facilities of various categories and their bed capacities, according to the type of ownership. It will be noted that State hospitals for the mentally ill and mentally retarded, general hospitals of all types, and proprietary long-term care facilities (nursing homes) dominate the pattern, and account for a large majority of the beds in use. County general hospitals and long-term care facilities include about 15 percent of the beds.

Table 6

NUMBER OF LICENSED FACILITIES AND BEDS IN USE[1]
BY CATEGORY AND TYPE OF OWNERSHIP IN CALIFORNIA
MARCH 31, 1966[a]

CATEGORY	TOTAL		STATE		COUNTY		CITY		DISTRICT		PROPRIETARY		NONPROFIT	
	Fac.	Beds	Fac.	Beds	Fac.	Beds	Fac.	Beds	Fac.	Beds	Fac.	Beds	Fac.	Beds
General	514	66,345	-	-	57	16,598	8	255	54	4,863	178	10,544	217	34,085
Tuberculosis	3	434	-	-	3	434	-	-	-	-	-	-	-	-
Psychiatric[2]	307	38,070	12	27,489	30	914[b]	-	-	2	39	223	8,043	40	1,585
Mentally Retarded[2]	374	19,033	4	15,500[c]	-	-	-	-	-	-	353	2,589	17	944
Long-Term Care	1,177	62,984	-	-	20	7,373	-	-	-	-	1,013	48,238	144	7,373
Nursing and Convalescent Homes	1,096	51,736	-	-	7	408	-	-	-	-	994	47,428	95	3,900
Establishments for Handicapped Persons	43	2,198	-	-	1	250	-	-	-	-	8	30	34	1,918
Specialized Tuberculosis	3	324	-	-	2	225	-	-	-	-	-	-	1	99
Other Specialized Hospitals	35	8,726	-	-	10	6,490	-	-	-	-	11	780	14	1,456
Maternity Hospitals	7	107	-	-	-	-	-	-	-	-	-	-	7	107

1 Excludes beds under construction, and Federal facilities of all types.
2 Psychiatric and mental retardation facilities operated by the State Department of Mental Hygiene are not licensed.

a Figures for psychiatric and mentally retarded current to April 30, 1966.
b Excludes 1,092 unlicensed psychiatric beds in 31 county hospitals.
c Includes approximately 2,100 beds for the mentally retarded in 3 additional adult units of the 12 State-operated psychiatric hospitals.

Sources: State of California Department of Public Health, Bureau of Hospitals. Licenses.
State of California Department of Public Health, Bureau of Hospitals. Inventory of Mental Hygiene Facilities, April 30, 1966.
State of California Department of Mental Hygiene, Bureau of Statistics.
State of California Department of Mental Hygiene, Directory: Private Institutions Licensed by the Department of Mental Hygiene, July 1, 1964 (and supplements to April 1, 1966).

GENERAL SHORT-TERM HOSPITAL SERVICES*

The most recent, complete data concerning use of general short-term hospital services in California cover the period through 1964. To elucidate how Californians use general short-term hospital services, three indices are examined: the number of beds per 1,000 population, the number of patient days per 1,000 population, and occupancy rates.

California

Increased population has been a major influence on growth of hospitals in the state. Table 7 and Figure 1 indicate, however, that the rate of nonfederal short-term general and other specialized hospital beds has fluctuated within a narrow range over the last decade: 3.02 to 3.23 beds per 1,000 population. A slight upward trend has been evident since 1957. ("Other Specialized Hospitals" excludes mental and tuberculosis hospitals, which provide long-term care.)

Comparative stability is also reflected in utilization rates for the state as a whole, from 791 to 836 patient days per 1,000 population. (This rate is derived by multiplying the number of admissions per 1,000 population by the average length of stay in days.) Since 1951, California's hospital admission pattern has paralleled that of the United States, but currently is about 5 percent lower. The average length of stay in California has declined steadily, while it hit a plateau in the nation at large during the middle 1950's (see Figure 2).

Occupancy has fluctuated between 69.2 and 75.6 percent of total capacity during the same period. Since 1957, when the peak was reached, occupancy has declined. This may be attributed to both increased bed availability and shorter average length of stay.

The Five Regions

Figure 3 shows California's five Regions, as delineated in the California State Plan for Hospitals, July 1961-June 1962. Since use of health services varies considerably by age, shifts in the age distribution of the population over time

* This paper, in an expanded form, was published as Working Paper #13, by the Hospital Utilization Research Project, and in a popular version, "Highlights of Hospital Use in California," has been submitted to Hospital Forum.

are influential. The civilian population of the state increased by 48 percent from 1950 to 1960, but the greatest increase was of persons under age 14 (83 percent). The next largest increase was among the aged, persons 65 years of age and over (54 percent). Except for a relatively greater increase of the elderly population in Region III, the change in age distribution among the Regions was not remarkable.

Figure 4 illustrates several measures of utilization experience, by Region, in the period 1953-1964. These rates have not been adjusted for the factor of migration, a very difficult element to interpret precisely.

Table 7

SELECTED UTILIZATION DATA FOR NONFEDERAL SHORT-TERM GENERAL AND OTHER SPECIALIZED HOSPITALS CALIFORNIA, 1953-1964

YEAR	CIVILIAN POPULATION	NUMBER OF BEDS	BEDS PER 1,000 POPULATION	PATIENT DAYS	PATIENT DAYS PER 1,000 POPULATION	PERCENT OCCUPANCY
1953	11,681,000	35,299	3.02	9,466,053	810	73.5
1954	12,177,000	37,463	3.07	9,629,301	791	70.4
1955	12,668,000	38,701	3.06	10,211,393	806	72.3
1956	13,247,000	40,457	3.05	11,014,977	831	74.5
1957	13,848,000	41,955	3.02	11,571,963	836	75.6
1958	14,410,000	43,885	3.04	11,657,927	809	72.8
1959	14,964,000	45,909	3.07	11,987,157	801	71.5
1960	15,417,000	49,493	3.21	12,494,537	810	69.2
1961	16,163,000	50,297	3.11	12,918,620	799	70.4
1962	16,737,000	53,636	3.20	13,576,779	811	69.4
1963	17,349,000	na	na	na	na	na
1964	17,912,000	57,841	3.23	14,431,062	806	68.4

na Not available.

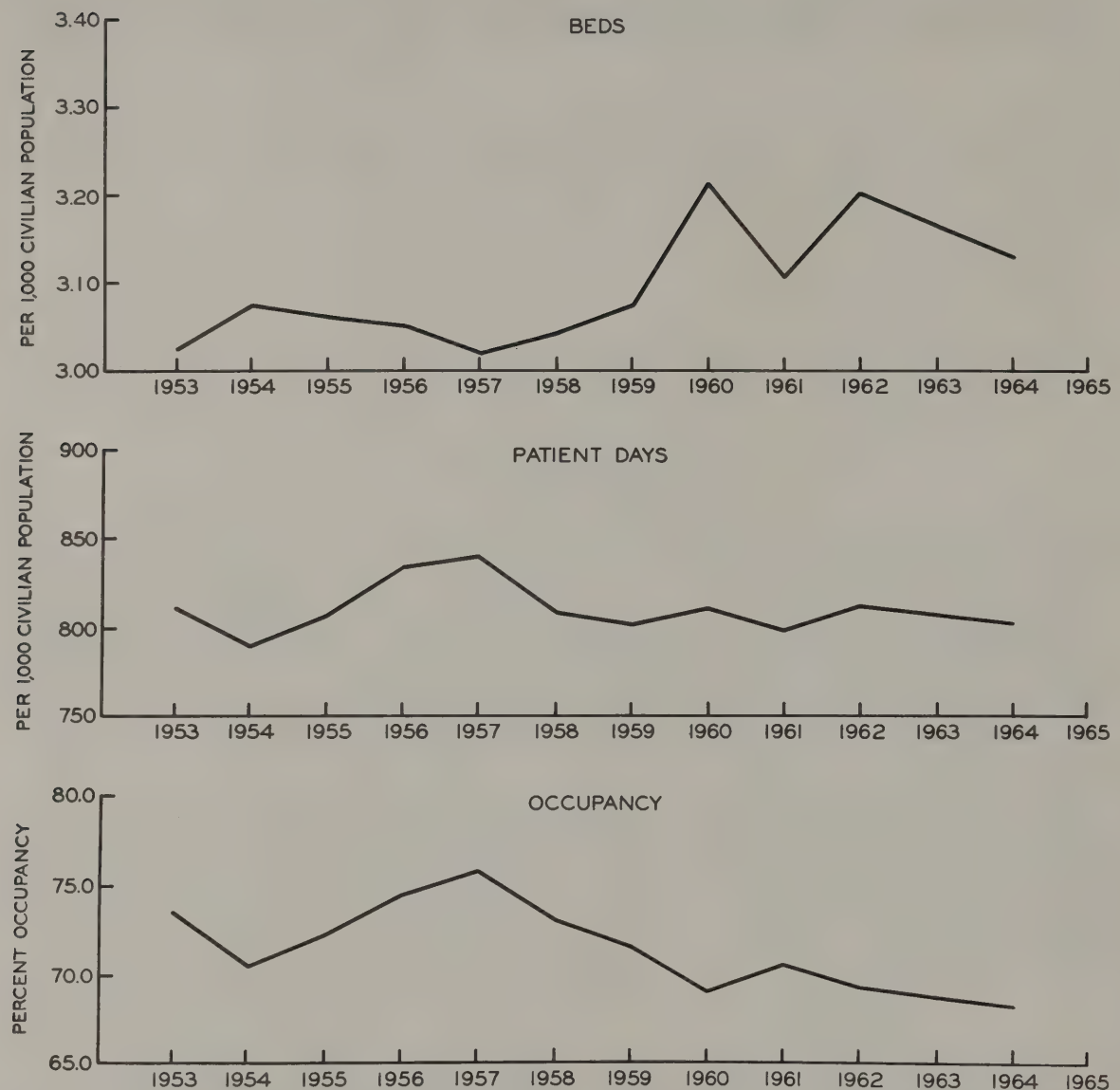
Note: Percent occupancy for State Plan calculated by $\frac{\text{Patient Days}}{365 \times \text{Beds}} \times 100$.

"Other Specialized Hospitals" excludes mental and tuberculosis hospitals, which provide long-term care.

Sources: State of California Department of Public Health, Bureau of Hospitals. California State Plan for Hospitals. July 1955-June 1956 through July 1965-June 1966.
State of California Department of Finance. California Population, 1963. Sacramento, 1964, Tables 6, 8, p. 10, 12; and California Population, 1964.

FIGURE 1

**SELECTED UTILIZATION DATA
FOR NONFEDERAL SHORT-TERM GENERAL AND OTHER SPECIALIZED HOSPITALS
CALIFORNIA, 1953–1964**



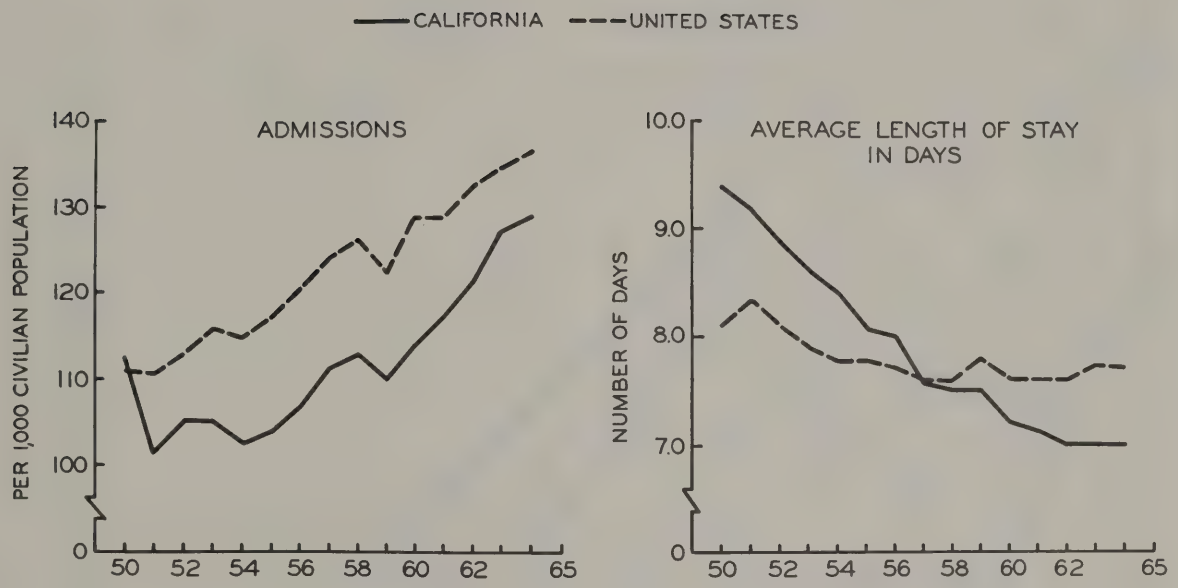
Note: "Other Specialized Hospitals" excludes mental and tuberculosis hospitals, which provide long-term care.

Sources: State of California Department of Public Health, Bureau of Hospitals. *California State Plan for Hospitals. July 1955–June 1956* through *July 1965–June 1966.*

State of California Department of Finance. *California Population, 1963.* Sacramento, 1964, Tables 6, 8, p. 10, 12; and *California Population, 1964.*

FIGURE 2

**SELECTED UTILIZATION RATES
FOR NONFEDERAL SHORT-TERM GENERAL AND OTHER SPECIALIZED HOSPITALS
UNITED STATES AND CALIFORNIA, 1950–1964**

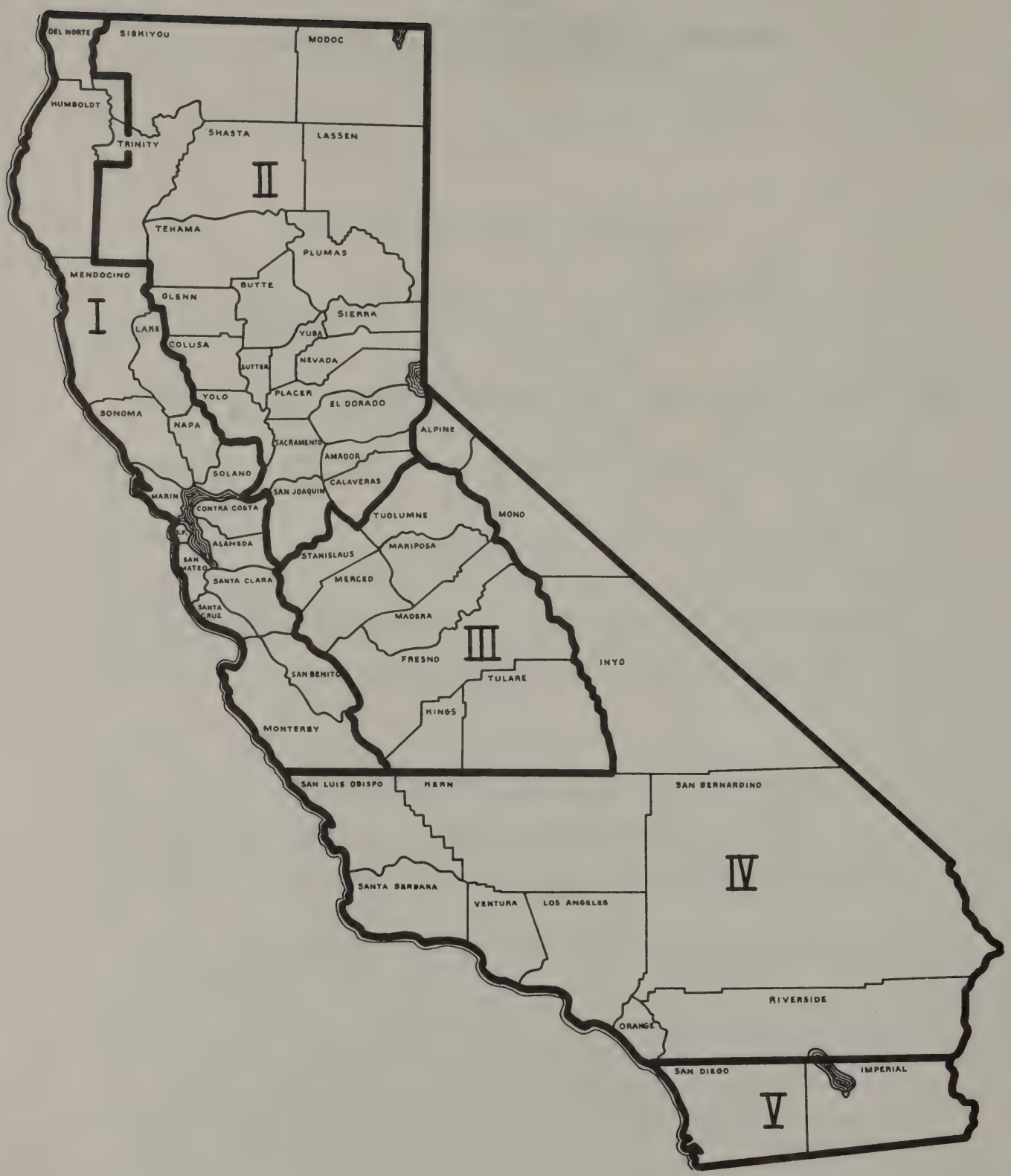


Note: "Other Specialized Hospitals" excludes mental and tuberculosis hospitals, which provide long-term care.

Sources: J Amer Hosp Assn, *Hospitals: Guide Issue (Pt. 2)*. 1950–1964
U.S. Bureau of the Census. *Current Population Report: Population Estimates*. P-25, No. 268, June 17, 1963.
State of California Department of Finance. *California Population, 1963*. Sacramento, 1964, Tables 6, 8, p. 10, 12; and *California Population, 1964*.

FIGURE 3

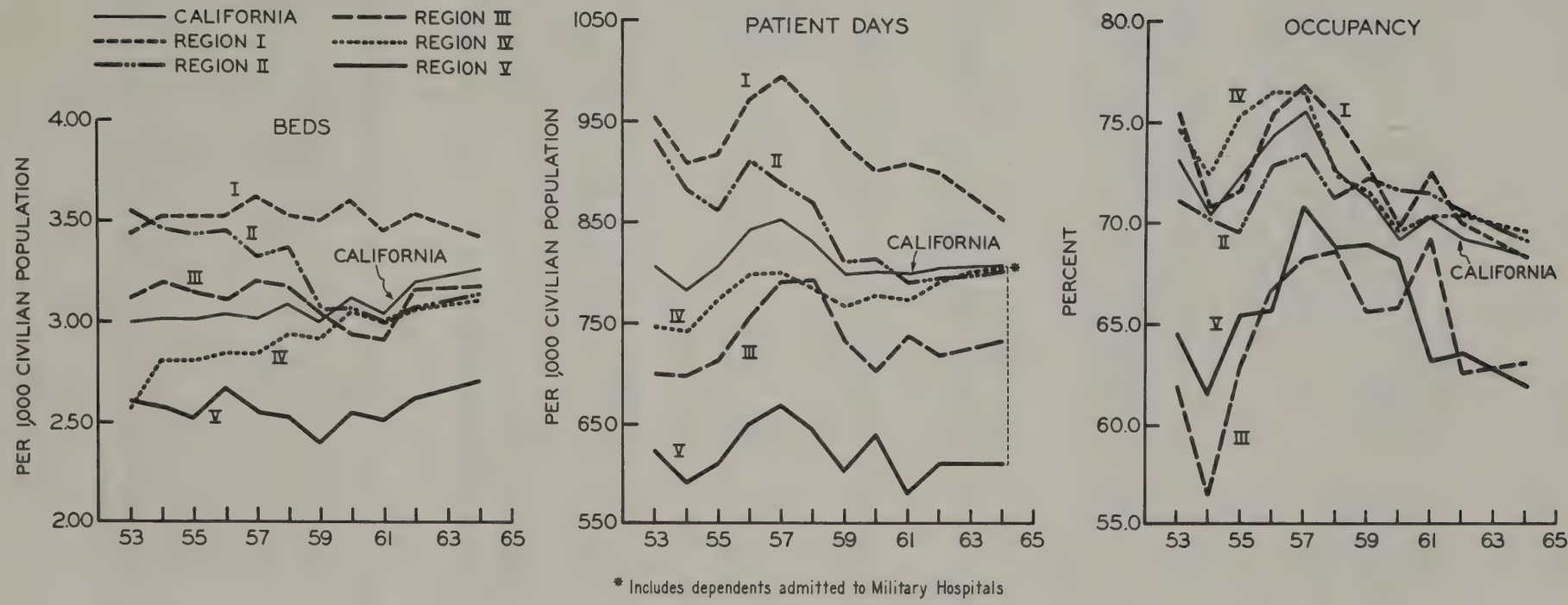
FIVE HOSPITAL REGIONS
CALIFORNIA



Source: State of California Department of Public Health, Bureau of Hospitals. *California State Plan for Hospitals.* July 1961–June 1962.

FIGURE 4

SELECTED UTILIZATION RATES FOR NONFEDERAL SHORT-TERM GENERAL AND OTHER SPECIALIZED HOSPITALS CALIFORNIA AND FIVE REGIONS, 1953–1964



Note: "Other Specialized Hospitals" includes mental and tuberculosis hospitals, which provide long-term care.

Sources: State of California Department of Finance. Annual Population Estimates prepared for *California State Plan for Hospitals.*

State of California Department of Public Health, Bureau of Hospitals. *California State Plan for Hospitals. July 1955–June 1956* through *July 1965–June 1966.*

San Diego County Hospital and Health Facility Planning Commission figures (Unpublished Data).

Beds: Only slight fluctuation is perceptible in Region I; Region II has experienced a steady decrease of beds to population; Region III has varied only slightly from the statewide average. Regions IV and V had the lowest ratio of beds to population in the early 1950's. Region V declined or remained low, whereas Region IV (Los Angeles and 11 contiguous counties) experienced a steady increase during the same period. At present, half of all general hospitals and beds--as well as over half of the state's population -- are located in Region IV.

Patient Days: It must be assumed that the large medical teaching institutions attract patients from within and even outside of a single Region, and hence influence patient day and occupancy rates. Region I, for example, which had the highest ratio of patient days to population, includes the medical institutions in and around San Francisco.

Region II had a decrease in patient days as in available beds. Despite the decrease, Region II has maintained the second highest rate, undoubtedly reflecting the use of recreational -- and hospital -- services by nonresident visitors.

Region III experienced a sharp, steady increase from 1953 to 1958, and then declined.

The rate in Region IV has, until recent years, paralleled the State average. While a medical center is growing in Region IV, in-migration for hospital services may be inhibited by geographical and travel time considerations.

The lower patient day rates in Region V are undoubtedly partly determined by the large military population whose dependents have access to government hospital facilities. In a single year, 1964, an estimated 23,975 military dependents were admitted to San Diego County's two military hospitals.(75) Were this factor taken into account for Region V, the line described would have been considerably higher than presently depicted in Figure 4 -- perhaps approximating the pattern of Region IV.

Occupancy: Regions I, II and IV maintained annual occupancy levels of 69 to 76 percent throughout the 12-year period. Region III, excepting a 1954 low of 56 percent, fluctuated between 62 and 69 percent of occupancy, and Region V varied between 61 and 70 percent. Since 1957, all Regions have experienced a general decline in occupancy.

It would be useful to compare regional occupancy patterns of long-term beds found both in general hospitals and nursing homes, but time-series data on nursing home occupancy by Region are not available.

Projections

Projections to 1970 and 1980 were derived from the interpolation of age-specific utilization rates for Western Region and Kaiser Northern California. The assumption was made that such age-specific rates remained constant between age groups for the years 1960, 1970 and 1980.

Table 8 shows the projected hospital day rates for the years 1970 and 1980. Column two reflects the assumption that, with implementation of Medicare, hospital utilization by the aged will increase by 10 percent in 1970 and 20 percent in 1980. In addition, the average length of stay would level at 7.0 days. Under these assumptions, the projected age-adjusted hospital day rate would increase over the two decades.

Table 8

HOSPITAL DAYS PER 1,000 POPULATION BY AGE
CALIFORNIA, 1960, 1970, 1980

YEAR	AGE-SPECIFIC PATIENT DAY RATE[1]	AGE-SPECIFIC PATIENT DAY RATE[2]	PERCENT CHANGE IN RATE
1960	840	840	-
1970	835	857	+2.6
1980	812	892	+11.0

[1] Based upon U.S. National Health Survey Western Region Age-Specific Rates times California's Civilian Population.

[2] Based upon assumption of 10 percent increase in patient day rate among the aged in 1970, and 20 percent in 1980.

In the absence of utilization data, analysis and projections of how persons with special health problems will use general short-term hospital services cannot be made.

SPECIALIZED HOSPITAL SERVICES

In the past years, separate hospitals were established to care for certain illnesses such as mental illness, tuberculosis and other communicable diseases; to render specialized care for children, mothers and infants, the aged; and for persons requiring orthopedic, ophthalmalogic or rehabilitative services. But in recent years, the trend has been to consolidate all needed health services, especially inpatient hospital services, within general hospitals. The beginnings of a "one-door" approach, recommended by the Governor's Advisory Committee

on Medical Aid and Health,[76] have taken place in California: today, general hospital beds are given over to psychiatric and rehabilitation cases; maternity or "lying-in" hospitals scarcely exist in California; of the five hospitals designated as "Children's Hospitals," only two treat children exclusively. Consolidation has occurred not merely because some diseases have declined, or because maintaining so many treatment centers is costly, but also because continuity of care and out-of-hospital care for many conditions are now found more desirable.

As tuberculosis has declined in impact, the number of facilities in California devoted exclusively to its treatment has dropped to three. Care is now being offered in general hospitals, both private and county, and much current treatment is handled through community outpatient services. The tendency to maintain ill persons in the community is even more characteristic of the mental health field. Day treatment centers and community outpatient clinics complement the large State hospitals, permitting many mentally ill patients to be restored to familiar environs or kept out of institutions. California now has the largest number of general hospitals admitting psychiatric patients, 71, of any state in the nation.[77]

The trend to consolidate and to complement inpatient with outpatient services has been accelerated by several developments in payment. Tuberculosis and mental illness, previously excluded from most prepaid medical insurance plans, are now covered by some. Tax-supported programs provide care in general hospitals for the special needs of the aged, disabled and crippled, for example -- who formerly sought care in specialized institutions in order to have any at all.

Psychiatric Hospital Services

The Department of Mental Hygiene has the primary responsibility for the prevention, diagnosis, treatment and care of mentally retarded and mentally ill persons. The State first assumed responsibility in 1851, establishing the first State mental hospital in Stockton in 1853. The last large hospital for mentally ill patients was opened in 1954; the last new hospital for the mentally retarded was opened in 1959.[78,79]

Through the Department's inpatient and outpatient programs, care is provided at any one given time to about 70,000 Californians. In addition, over 80,000 persons in fiscal year 1964-1965 received treatment in community-based mental health programs, known as Short-Doyle programs. In fiscal year 1965-1966, 40 Short-Doyle programs were operating.[80]

The Department of Mental Hygiene maintains 57 facilities: 10 hospitals for the mentally ill which in 1963 had an inpatient population of 33,000; 4 hospitals providing inpatient care for about 12,000 mentally retarded persons; 2 neuropsychiatric institutes with an inpatient case load of about 226; 8 State Mental Hygiene

Clinics; 3 Day Treatment Centers; and 30 Bureau of Social Welfare field offices.[79] The Department of Mental Hygiene also administers the Private Institutions Licensing Act, under which privately operated facilities for the mentally ill and mentally retarded are licensed. (As shown in Table 6, in April 1966, there were over 630 private facilities with a licensed bed capacity exceeding 13,000.)

While the state's population is growing, further construction of large mental hospitals is neither planned or expected. Instead, emphasis will continue on improving services in existing hospitals and developing community-based alternatives -- outpatient clinics, day treatment centers, foster care programs, and financial assistance to an increasing number of community operated mental health programs.[78]

Current Utilization: The ratio of patients in State hospitals to general population is lower in California than in any other large state: in 1962, 209 per 100,000 population. For several years, there has been an actual reduction each year in the number of patients in State hospitals for the mentally ill.[78] At the 1959 peak, 37,500 patients were in State hospitals for the mentally ill; this figure has decreased steadily to 31,233 in September 1964. This decline was achieved despite rapid population growth in the same period. Admissions to State hospitals have increased somewhat since 1959, but the resident population has declined as hospitalization is for shorter periods of time.[81]

Other facilities and programs serve the mentally ill, and they should be considered in appreciating the full complexion of specialized institutions. In 1964, Doctor Lowry reported that 12,000 persons were on indefinite leave from State hospitals: 3,000 had been on leave for more than a year but are still the responsibility of the Department of Mental Hygiene, and of them 80 percent received care through Short-Doyle programs.[81] Family care is a flourishing service. As of June 1964, over 3,200 persons, about equally divided between the mentally ill and mentally retarded, were receiving care in nearly 800 private homes.[82] Work placement involved up to 300 persons in sheltered workshops, and this rehabilitation program is being expanded.[78]

Approximately 12,700 mentally retarded persons received treatment and training at the State's four hospitals for the retarded and at two special adult units in State hospitals for general psychiatry. Admissions have increased, but as of June 30, 1963, at least 1,500 retarded were on waiting lists. Studies have indicated that State hospital care may not be required in about 60 percent of waiting-list cases; patient needs could be served as well or better through alternative community services, were they available.[78]

Projections: Planning for the future use of specialized facilities for the mentally ill and mentally retarded is a complex matter. Unquestionably, trends in care and payment for psychiatric care are going to be even more influential than in the case of general hospital facilities. In general, the trend will be to develop a phalanx of programs and services to handle patients with various degrees of severity of illness, and to stimulate such development in communities around the state rather than to embark on massive expansion of existing State hospitals. Only a digest of projections may be given here. The reader may wish to consult several reports[78-84] of the Department of Mental Hygiene for a more detailed understanding of the matter.

In 1960, the Governor's Committee on Medical Aid and Health estimated that a reasonable expectation in 1975 should be three psychiatric beds per 1,000 population. This is based on the expectation that present progressive programs which depart from old traditions and practices in the treatment of mental illness will be accelerated.[85] Table 9 illustrates 1960 and proposed 1975 bed needs.

Table 9

EXISTING AND PROPOSED PSYCHIATRIC BED NEED
CALIFORNIA, 1960, 1975

CATEGORY	EXISTING 1960	PROPOSED 1975
	3.9 beds per 1,000	3 beds per 1,000
Total Psychiatric Beds	58,176	75,900
Total Long-Term Custodial Treatment	47,274	50,600
State	40,268	-
County	-	50,600
Community General Hospitals	-	-
Community Private Hospitals	7,006	-
Total Short-Term Treatment	10,902	25,300
State	8,040	12,650
County	930	-
Community General Hospitals	448	12,650
Community Private Institutions	1,484	-

Source: State of California Governor's Advisory Committee on Medical Aid and Health. Health Care for California. Berkeley, State of California Department of Public Health, 1960, p. 42.

The Governor's Committee suggested that the proposed 75,000 beds in 1975 be distributed differently from the 58,176 beds in 1960, particularly that the proportion of beds devoted to active treatment be increased from 18 percent to at least 33 percent. And further, it was recommended that half of the active treatment beds be provided in State and county hospitals, the other half in general and specialized community hospitals.(85)

The actual case load to be accommodated in mental health services is perhaps of greater significance. As indicated in the Long Range Plan for Mental Health Services (1962), as many as 2,530,000 Californians could require some degree of care in the year 1975. The Department of Mental Hygiene postulates that while there will be more than 6 million persons during their lifetime needing professional psychiatric help, probably only about 3.5 million will actually seek help.

As shown in Table 10, 162,654 persons will probably receive inpatient and/or outpatient services in 1975. Changes will influence increasing admissions but decreasing case loads, as inpatient care becomes more a process in restoring people to the community and focusing services for them there. It is possible that the 1975 estimates stated here will be altered, as outpatient services increase. One other factor in hastening return of many persons to community services is that about a quarter of State hospital case loads are eligible for care under the California Medical Assistance Program in local communities.

While it appears that potential inpatient case loads and admissions will increase, hospitalization will be briefer; community-based mental health services are bound to assume even more significance, and the outpatient figures stated here are probably underestimated.

Mental Retardation: The current attention to mental retardation is bound to influence future facilities and services. California augmented its special inpatient facilities for the mentally retarded from 1945 to 1963, but the bed ratio of 71 beds per 100,000 population in 1963 has not been sustained, despite continued expansion. As the entire approach to mental retardation -- research and services -- is now receiving concentrated attention, it is difficult to make predictions in this field. Current reported prevalence rates probably underestimate the extent and severity of mental retardation in California.(83)

Hospitalization is not the sole answer for all persons with mental retardation. In fact, one survey indicated that only about a third of the resident population in State hospitals for the mentally retarded require the elaborate services found there. For another 30 percent, nursing home care would be appropriate; for an equal proportion, foster homes; and about 5 percent could remain at home with some kind of assistance, counseling and funds. Assistance for many mentally

Table 10

PSYCHIATRIC RESOURCES IN CALIFORNIA
NUMBER OF FACILITIES AND PATIENTS SERVED, 1961
ESTIMATE OF PATIENTS, 1975

TYPE OF RESOURCE	NUMBER OF FACILITIES	1961				1975	
		NUMBER OF PATIENTS		RATE PER 100,000 STATE POPULATION[2]		ESTIMATE OF PATIENTS IF 1961 RATES PER 100,000 REMAINED CONSTANT	
		Case Load[1]	Annual Admissions	Case Load	Annual Admissions	Case Load	Annual Admissions
Facilities for Patients with Mental Disorders, Total	-	103,483	104,025	642.9	646.3	162,654	163,513
Inpatient Psychiatric Facilities	254	58,783	84,851	365.2	527.2	92,396	133,381
Private Psychiatric Facilities (Licensed by the Department of Mental Hygiene)	194	5,682	22,152	35.3	137.6	8,931	34,812
Psychiatric Wards in Non-Governmental General Hospitals	9[a]	145	2,964	0.9	18.4	228	4,655
Psychiatric Wards in County General Hospitals	32[a]	567	31,798	3.5	197.6	886	49,993
State Hospitals for General Psychiatry	10	47,659	23,790[b]	296.1	147.6	74,913	37,393
Neuropsychiatric Institutes (State)	2	128	422	0.8	2.6	202	658
Veterans Administration Hospitals	7[a]	4,602	3,725	28.6	23.2	7,236	5,870
Outpatient Psychiatric Facilities	61	13,000	19,174	80.8	119.1	20,442	30,132
Facilities for Patients with Mental Retardation, Total	-	15,024	2,671	93.3	16.6	23,605	4,200
Inpatient Psychiatric Facilities	193	15,024	2,671	93.3	16.6	23,605	4,200
Private Psychiatric Facilities (Licensed by the Department of Mental Hygiene)	187	1,786	1,668	11.1	10.4	2,803	2,631
State Hospitals for the Mentally Retarded	6	13,238	1,005	82.2	6.2	20,797	1,569

[1] Case load data may be either year-end patient population or average daily population. Data for State hospitals include all patients on records.

[2] Based on total state population estimates as of July 1, 1961, made by the State Department of Finance, Population Research Section, July 1961.

[a] 1960 data.

[b] Excludes changes in legal classification.

Source: State of California Department of Mental Hygiene. A Long Range Plan for Mental Health Services in California. Sacramento, 1962, Section D (Selected Totals 1961 and 1975 Estimates).

retarded means a complement of educational, vocational, recreational and other auxiliary services, predominately nonmedical, which could permit them to live in foster homes. Financial assistance is needed by most of them.(83)

The greatest lack of available services is private residential care for older retardates, who must compete for space in State hospitals. One survey disclosed that more than half of the inpatient population of State hospitals for the mentally retarded are persons over age 18.(83) While more specialized hospital services will be required, merely to accommodate the growing numbers expected by applying current prevalence rates to an increasing population, many other types of services and facilities will be required. Sophistication in recognition and treatment of mental retardation, as well as an enlightened approach toward helping every retardate to achieve his full potential, will redirect services away from institutionalized care. The Department of Mental Hygiene and others in the field support rapid expansion of community-based services for the mentally retarded: services of declared merit such as special education programs in public schools; public financial assistance; integrated diagnostic, referral and counseling services; local and private nursing care facilities; employment assistance; recreation facilities; and special programs such as day care centers and sheltered workshops.(78)

The impact of intensified Federal and State funding to support diversified programs will decidedly affect the scope of services which will predominate in 1975. Federal action, prompted largely by President Kennedy's interest in mental retardation, increased appropriations to existing programs, such as Crippled Children Services, and stimulated demonstration and research projects.

In California, a unique endeavor, the establishment of regional diagnostic and counseling centers, will decidedly improve the scope of services for the mentally retarded and their families. AB 691 (1965) empowered the State Department of Public Health to contract with appropriate agencies to establish such centers, which will provide diagnostic, treatment, counseling and follow-up services. For thousands of children, given the single option of institutionalization, care has been largely a matter of "waiting." In addition to the greater access to greater numbers afforded by regional distribution of centers, counseling on a continuing basis will help each child to attain his educable and vocational potential. In future years, we can anticipate fewer children requiring placement in large, institutional facilities. The services they and their families need will be available closer to home, and many so-called mentally retarded children will be contributing to society rather than depending on it.

The impetus behind AB 691 (and AB 769, which creates a Mental Retardation Program and Standards Advisory Board) stems originally from the persistent efforts of many parents of mentally retarded children. In recent years, national, state

and local groups have concentrated attention of meeting the total needs of our mentally retarded and their families, and on supporting research and education to prevent the condition. Outstanding among studies of how to genuinely aid the mentally retarded is the work of the Governor's Commission on Mental Retardation (86) and the Assembly Ways and Means Committee's Subcommittee on Mental Health Services.(87) Recommendations of these groups tend to be uniform in principle, stressing prehospitalization services which, in fact, could appreciably reduce the numbers of retardates actually institutionalized, and development of alternative residential facilities to meet the diverse needs of the retarded and their families. Considerable emphasis will be placed on helping the retarded to become as self-sufficient as their capabilities will allow.

Imaginative plans, now well supported with Federal and State funds, should reverse the trend of sending the mentally retarded away from their families and communities. In 1975, a smaller proportion of the population may actually be afflicted by mental retardation than today; and services to maximize the potential of the retarded will have been extended and improved.

Prevention of mental retardation is a less tangible goal, dependent on many variables: research, medical care, application of known precautions -- even family planning.

Economic Aspects: Maintenance of California's State mental hospitals is borne by the State government, with those able to pay a portion of their expenses contributing to the cost of their care. Inpatient care is costly, and the greatest proportion of the Department of Mental Hygiene's budget is directed toward inpatient services. In 1962-1963, the Department operated under a budget of $154.4 million, considerably less than that of mental hygiene expenditures in other large states.(78) Over $7 million was allocated to counties for Short-Doyle community programs, a portion of which was for inpatient care.(78)

Tuberculosis Hospitals

As mentioned earlier, tuberculosis has declined in importance from the leading cause of death less than a century ago to 16th in rank now. Public health measures, including segregated hospitalization, contributed to its control. Since 1962, however, the numbers of tuberculosis deaths and active cases have remained static, so that renewed efforts must be made to eradicate the disease (see Table 11).

California's climate has attracted tuberculosis patients. Tent colonies and "desert" living were eventually supplanted by cottage-type institutions under county support, private sanitoria and nursing homes. Since 1915, the State has made subventions to counties in lieu of operating a State institution for the tuberculous.

Table 11

NEWLY REPORTED TUBERCULOSIS CASES[1]
AND TUBERCULOSIS DEATHS
CALIFORNIA, 1953-1964

(By place of residence)

YEAR	NUMBER OF CASES[1]	NUMBER OF DEATHS
1953	8,094	1,373
1954	7,904	1,223
1955	7,267	1,075
1956	6,774	1,026
1957	6,691	905
1958	6,323	869
1959	5,831	814
1960	5,566	806
1961	5,331	608
1962	4,887	637
1963	4,901	594
1964	4,895[a]	600[a]

[1] New active cases (including primary cases without demonstration of tubercle bacilli) plus reactivations not previously reported.

[a] Provisional.

Source: State of California Department of Public Health, Morbidity and Death Records.

The number of tuberculosis hospitals and available beds reached a peak in 1953: 73 hospitals containing 11,185 tuberculosis beds.(88) The number of specialized hospitals licensed exclusively for tuberculosis has dwindled to three. Other facilities also have beds licensed for inpatient care of tuberculosis patients, and many former tuberculosis hospitals, though converted to general or rehabilitation hospitals, still maintain some tuberculosis beds.

The advent of anti-tuberculosis drugs in the 1950's revolutionized treatment of this disease. Today, most of the tuberculosis patient's treatment is received outside of a hospital. Although a period of hospitalization is recommended for almost all patients, the average length of stay in a hospital has been greatly shortened; chemotherapy ordinarily brings about quite prompt improvement and shortens the period of communicability. At any given time, fewer than half of the known active cases under treatment are in a hospital, and probably many who are hospitalized could be at home if their communities had facilities to continue proper out-of-hospital care.(88)

Projections: Federal and State programs for the eradication of tuberculosis were proposed in 1965. However, a less remote goal is to have a population free of active disease. The need for inpatient facilities will probably remain at about the level of 1965, because of the increase in secondary reactivation among the aging population and the gradual development of drug-resistant cases among those treated by drugs now in use. The present outpatient treatment facilities need to be maintained at about current levels, but some consolidation of services may be indicated as local case loads are reduced between 1970 and 1975.(89)

Economic Aspects: In lieu of a State institution, individual counties maintain sanitoria, assisted by State subvention funds. In the early 1950's, more than 2.2 million days of hospitalization annually were subsidized for tuberculosis patients. In 1963, the number of annual subsidized days of care for tuberculosis had dropped to under 1 million.(88)

LONG-TERM CARE FACILITIES AND SERVICES

Specialized institutions for the medical and custodial care of the chronically ill and aged have become more abundant in the last decade, stimulated by public programs to finance such care, as well as the increase in numbers of individuals requiring care in California. A number of institutions provide long-term care services: county hospitals, State mental hospitals, specialized hospitals, both public and voluntary, and more recently nursing and convalescent homes. "Board and care" facilities, licensed by the State Department of Social Welfare, do not provide medical care.

Table 12 indicates the growth pattern in the last five years, and estimates for 1970 and 1975. The greatest growth has been in nursing and convalescent homes, which are licensed by the State Department of Public Health. From 1950 to 1960, the number of beds in nursing homes almost doubled; from 1960 to 1964 alone, that number more than doubled. This is in contrast to the increase in the population 65 years and over -- 54 percent increase from 1950 to 1960, and 13 percent increase from 1960 to 1964.(90) In general, nursing homes are located in metropolitan areas. Today, in California, 12 counties have no nursing homes; 7 have only 1 and 7 others have only 2. Nursing homes in three metropolitan counties -- Alameda, Los Angeles and San Diego -- comprise about 54 percent of all nursing home beds, while 50.8 percent of the State's population reside in these counties.(90)

While the increase in California's population -- and especially the growing number of persons living beyond age 65 -- stimulated the demand for out-of-home care institutions, the greatest impact on the nursing home industry probably came from the Medical Assistance for the Aged program. During the past few years, the MAA program substantially accelerated construction of new nursing homes.(90)

Table 12

LONG-TERM CARE SERVICES
NUMBER OF BEDS, 1950, 1960, 1964
ESTIMATED BED NEED, 1970, 1975

YEAR	TOTAL LONG-TERM CARE BEDS[1]	LONG-TERM CARE BEDS		
		County Hospitals[2]	Licensed Nursing Homes	Establishments for Handicapped Persons
1950	12,613	3,356	8,706	551
1960	26,374	7,880	16,819	1,675
1964	48,097	10,361	35,945	1,791
	ESTIMATED			
1970	80,000			
1975	100,000			

[1] Excludes beds in mental, tuberculosis and certain specialized hospitals for long-term care.

[2] Includes beds called "long-term beds" in county general hospitals, beds in county nursing homes, and certain beds in county specialized hospitals.

Source: State of California Department of Public Health, Bureau of Hospitals Records.

Current Utilization: Occupancy is generally high in long-term care facilities, especially nursing and convalescent homes. A recent survey of California nursing and convalescent homes revealed an average occupancy of 86.3 percent, with only a relatively small number of homes having less than half their beds in use (see Table 13).

Table 13

OCCUPANCY OF NURSING HOMES
SEPTEMBER 15, 1964

RANGE OF OCCUPANCY	NURSING HOMES	
	Number	Percent
Total	713	100.0
50 Percent or Less	40	5.6
51-75 Percent	66	9.3
76-90 Percent	200	28.0
91 Percent or More	407	57.1

Source: State of California Department of Public Health. Study of Nursing and Convalescent Homes in California. Berkeley, 1965, Table 6.

The full measure of the MAA program can be appreciated from reports issued by the State Department of Social Welfare which administered the program until the California Medical Assistance Program absorbed this responsibility. In September 1964, MAA certificate holders exceeded 25,000; "beneficiary months" (i.e., one person receiving benefits for one month) had reached nearly 30,000. Of this number, 21,877 were in nursing homes, 6,229 in county hospitals, and 877 in other hospitals. Fully 55 percent of all patients in California nursing and convalescent homes were MAA recipients.(90)

While the MAA program contributed more than half of the patient load in nursing and convalescent homes, the age distribution of patients did not change substantially in the last few years: 95 percent of the patients are 65 years of age or over. Patients were most frequently admitted from general hospitals or personal or family homes. About one-third of discharged patients returned to personal or family homes; about one-sixth to hospitals; about one-sixth to other nursing homes, licensed State or county homes, hotels or boarding homes. About one-third died in nursing homes. Less than 3 percent of the patients required no nursing care; the preponderance were bed patients requiring extensive nursing care and services.(90)

County hospitals have maintained a fairly even occupancy of their long-term beds. Reimbursement for MAA patients helped to sustain long-term services needed for all patients.

In addition to the long-term care facilities described above which are licensed by the State Department of Public Health, and services for the "well aged" licensed by the State Department of Social Welfare, the State Department of Mental Hygiene licenses institutions which provide long-term care for mentally ill or mentally disordered persons whose primary needs are nursing services and intensive supervision.

The total capacity of all long-term care facilities in California currently runs close to 100,000, but as indicated earlier available inpatient facilities are evidently being built somewhat faster than the potential utilization rate. In 1965, about 6 percent of the population over 65 years of age were institutionalized, although not always in medical institutions.(90)

Projections: While the proportion of persons requiring long-term care is expected to remain rather constant, the numbers will increase greatly due to population growth (see Table 14). And although many chronically ill and aged persons may not require the complex services of institutional care, it is expected that at least the same quantity of institutional care will be required in 1975 as is available now.

Table 14

SELECTED OLDER POPULATION GROWTH IN CALIFORNIA
1900-1975

YEAR	POPULATION 65 AND OVER	PERCENT OF TOTAL POPULATION		
		65 Years of Age and Over	70 Years of Age and Over	75 Years of Age and Over
1900	76,846	5.2	2.8	1.2
1910	125,263	5.3	3.1	1.6
1920	200,301	5.8	3.5	1.8
1930	366,125	6.4	3.7	1.8
1940	555,247	8.0	4.7	2.4
1950	895,005	8.5	5.0	2.6
1960	1,376,204	8.8	5.5	3.0
	ESTIMATED POPULATION[1]			
1965	1,601,000	8.6	5.64	3.21
1970	1,841,000	8.6	5.57	3.30
1975	2,111,000	8.8	5.58	3.27

[1] Estimates are for civilian populations only.

Sources: U.S. Bureau of the Census. U.S. Census of Population, 1960, Vol. I, Characteristics of the Population, Part 6, California, Table 17.
State of California Department of Finance. California Population, Table 8.

The passage of Medicare has extended health benefits and medical assistance to an even larger segment of the population than presently eligible for public programs. In California, over 2 million persons are eligible for health benefits under Federal Medicare and the California Medical Assistance Program.

Many of these persons will require and use long-term care facilities. The addition of new services, as well as persons eligible for them, will certainly increase utilization. Consequently, staffing problems may be encountered in the initial phases of implementing Medicare programs.

Economic Aspects: Until recent decades, payment for long-term care of the chronically ill and aged involved substantial investments by the private sector -- "homes for the aged" maintained by religious, social and professional organizations -- and public support of the medically indigent in county hospitals. But with the advent of new public programs especially to assist the elderly in obtaining needed services, the larger burden has fallen upon government -- Federal, State and local government. Table 15 indicates expenditures under the Medical Assistance for the Aged program, and Table 16 compares per diem costs of three types of long-term care. The lower per diem cost of nursing home services reflects the absence of acute and severely disabled cases, requiring complex medical and paramedical services.

Table 15

MEDICAL ASSISTANCE FOR THE AGED PROGRAM
EXPENDITURES BY TYPE OF SERVICE
JULY 1, 1963-JUNE 30, 1964

TYPE OF SERVICE	AVERAGE NUMBER OF BENEFICIARY MONTHS[1]	EXPENDITURE	AVERAGE PER BENEFICIARY MONTH
Total Inpatient Services	23,435[a]	$80,228,727	$285.29
County Hospitals	6,830	29,414,546	346.72
Rehabilitation Facilities	125	979,536	653.46
Other Hospitals	828	4,593,964	462.12
Nursing Homes	15,652	41,354,140	220.17

1 Monthly average of persons for whom MAA payments were made during the period.

a Contains some duplications created by individuals for whom payments were made for more than one type of case.

Source: State of California Department of Social Welfare. Annual Statistical Report, 1963-1964: Public Welfare in California. Sacramento, 1964, Table 40.

Table 16

AVERAGE[1] DOLLAR COST INPATIENT CARE
PER BENEFICIARY MONTHS[2] AND PER DAY, 1964
MEDICAL ASSISTANCE FOR THE AGED PROGRAM

BY QUARTERS	COUNTY HOSPITAL				NURSING HOME		REHABILITATION
	First 30 Days		Over 30 Days				
	Per Month	Per Day	Per Month	Per Day	Per Month	Per Day	Per Day
January 1-March 31	$294.91	$24.97	$355.81	$13.52	$222.68	$7.84	$28.93
April 1-June 30	321.49	25.31	367.64	14.57	226.06	7.85	29.21
July 1-September 30	319.60	27.76	380.65	15.07	224.54	7.85	24.22
October 1-December 31	352.70	31.47	418.30	17.32	227.51	7.84	27.92

1 Averages do not represent total charges as they exclude beneficiaries' liability and insurance payments.

2 Beneficiary months represent the number of persons for whose care payments were made during the month. Minor duplications exist to the extent that payments were made for care rendered one person during more than one month, and for payments made to more than one facility for the same person.

Source: State of California Department of Social Welfare. Services and Expenditures Reports, by Quarters 1964, Statistical Series.

Per diem costs do not, of course, reflect the total cost of care. The cost for a patient discharged to his home from a rehabilitation facility after two months of care at the rate of $650 per month is less than the cost for the same patient kept in a nursing home for six months at a rate of $220 per month.

After Medicare programs become operative, costs of actual care can be computed. How these future costs will compare with those under MAA will have to be studied.

HOME CARE SERVICES

Noninstitutional care rendered to persons in their own home settings has been increasingly recognized as an essential component in the medical care spectrum. Organized home care services, provided by appropriate specialists, can serve two fundamental purposes: to extend needed medical and paramedical services to persons no longer requiring intensive institutional care; and to keep out of institutions persons needing only nominal supportive services. By so doing, fragmentation of care can be reduced; flexibility is permitted in selecting the care most suited to a particular long-term patient; patients who resist or reject prolonged hospitalization can receive some essential services at home; and institutions which do provide intensive care for the chronically ill and aged can devote themselves to those persons who require more elaborate medical management or who have no suitable home environs in which to receive essential services.

While long-term care facilities have flourished -- and been occupied -- in the past decade in California, it is estimated that perhaps only 5 or 6 percent of the population 65 years and over find institutionalization necessary. At this point, however, there are already sufficient licensed long-term beds to accommodate at least 7 percent of this population group. The presence of appropriate home health services in the community can appreciably diminish the need for institutionalized care.(91)

In 1960, as the idea of organized home care programs was beginning to be accepted and implemented, the Governor's Committee on Medical Aid and Health commented that: Californians have not yet developed enough of the community health services which people need before they enter hospitals and after they leave them. These services include home care, nursing visits, social services, rehabilitation, homemaker services and outpatient care . . . The lack of community health services thus leads to unnecessary and unduly prolonged hospitalization for those who could be served more effectively and more economically in their own communities.(92)

In the ensuing five years, the picture has changed -- for the better. And in the next decade, organized home care services are bound to accelerate, with Medicare and the California Medical Assistance Program providing partial or total

payment for this facet of medical care. In this document, home care, home nursing and homemaker services are discussed.

Home Care Programs

The idea of organized home care programs, as a means of providing extended medical and paramedical services in the home rather than perpetuating lengthy institutionalized care, has gained slow acceptance nationally, and in California as well. As of April 1965, 6 of the 50 organized home care programs in the nation were located in California (see Table 17).[93] All 6 meet the definition of organized home care developed at the 1960 Workshop on Home Care Services. This specifies that a coordinated home care program be centrally administered, and that through coordinated planning, evaluation and follow-up procedures, physician-directed medical, nursing, social and related services can be rendered to selected patients at home.[93]

Current Utilization: The estimated number of patients in the active case loads of California's 6 programs at any given time has been about 300; the total number of patients served annually prior to Medicare has been about 575. All 6 programs offer comprehensive, organized professional services, and patients are selected according to the following predetermined criteria:

1 the patient must be willing to accept home care;

2 medical management is feasible and recommended;

3 the home environment is suitable, and family members can accept responsibility of patient care;

4 the patient lives within reasonable (or predefined) radius of the hospital;

5 the patient is unable to obtain medical care in an outpatient service or physician's office;

6 the patient needs more than one service provided through home care;

7 the patient is assured a hospital bed when he needs it.

In 3 of California's programs, the majority of patients served are in the 45-64 age group; in the other 3, the majority are age 65 and over. In all of the programs, only 4 percent of patients served in 1962 or 1963 were in terminal stages of illness when admitted to the program.[94] All of the persons eligible for the

Table 17

HOME CARE PROGRAMS IN CALIFORNIA MEETING DEFINITION
DEVELOPED AT WORKSHOP ON HOME CARE SERVICES, CHICAGO, 1960
SELECTED CHARACTERISTICS

INSTITUTION	DATE PROGRAM BEGAN	FINANCING	NUMBER PATIENTS PER YEAR	SELECTED SERVICES AVAILABLE IN THE HOME									
				Physician	Registered Nurse	Social Worker	Physical Therapist	Dentist	Attendant	Laboratory Work	Oxygen	Appliances	Equipment
Los Angeles County General Hospital, Los Angeles (public, general)	1956	1956-60 Sp. Project Grant, State of California Department of Public Health, 1961 to date, Los Angeles County	100	X	X	X	X	X	X	X	X	X	X
City of Hope Hospital, Duarte (specialty hospital: cancer, TB, chest, cardiac diseases)	1957	Private, nonprofit hospital	30	X	X	X	X	X	X	X	X	X	X
Rancho Los Amigos Hospital, Downey (public, long-term rehabilitation hospital)	1953	Los Angeles County	120	X	X	X	X	X	X	X	X	X	X
Cedars-Sinai Medical Center, Los Angeles (general hospital and outpatient department)	July 1964	Demonstration Program-State Departments Welfare and Health, Los Angeles County Bureau Public Assistance and Cedars-Sinai	68 (first 6 months)	X	X	X	X		X	X		X	X
Mt. Zion Hospital Medical Center, San Francisco (general hospital and outpatient department)	1962	Private hospital operates program	74	X	X	X	X		X	X		X	X
Visiting Nurse Association, Inc., San Francisco (general services)	1962	Voluntary agency, patient fees, nonpay, State Department of Public Health, insurance	183	X	X	X	X		X			X*	X*

* Provided indirectly through community resource other than the VNA.

Source: Los Angeles County Hospital Home Care Program (Personal Communication); City of Hope Hospital, Duarte (Personal Communication); Rancho Los Amigos Hospital Home Care Program, 1964 Annual Report, Downey, California, Rancho Los Amigos Hospital, 1965; Cedars-Sinai Medical Center Department of Coordinated Home Care, Statistical Summary through December 31, 1964, Los Angeles, February 1965; Mt. Zion Hospital Home Care Program, 1964 Annual Report of Home Care, San Francisco, 1965; Visiting Nurse Association of San Francisco, Inc., Summary of 1964 Experience of Home Medical Care Program, San Francisco, 1965.

services afforded by organized home care programs may be considered individuals with "special health problems." In the main, the special characteristic is a condition of long-term chronic nature, producing some limitation of activity, but not so severe to require hospital or other institutional care. Many of the basic health needs -- medical, nursing, dental, therapy -- can be brought into the home, rather than forcing a patient with a nonacute condition to be institutionalized in order to meet his needs.

Projections: State and Federal Medicare programs will bring increased demand for out-of-hospital services, as well as increased use of hospital and nursing home facilities. Organized home care programs will need to be established in community agencies or hospitals if appropriate care is to be more broadly available.

Using the experience of one California program as illustration, some indication of the potential case load is available. In 1965, the Cedars-Sinai Medical Center asked the entire medical staff of 1,175 physicians -- in many specialties -- how many of their present private case load they felt could benefit from coordinated home care.(94) A description of the services given to Public Assistance Medical Care patients using the Center accompanied the questionnaire. Roughly half of the physicians responded. Of them, nearly two-thirds indicated they would use a home care program if it were available. They estimated they would refer, on the average, 3 to 4 patients a year. If even half of the more than 22,000 physicians actively practicing in California were to refer this number, 30,000 to 40,000 individuals might be referred to organized home care services each year. Numerous new programs must be developed to accommodate the increased potential case load.

The extension of organized home care programs is already occurring, as payment for such services is covered by Medicare and as community resources to fill this gap are developed. The programs already operating in California have generated considerable support for home care as an essential community service.

Economic Aspects: Although a uniform cost accounting method is not being used in the 6 California programs, several home care programs in this state and elsewhere have indicated that home care can be provided at less cost than hospital care. One California hospital-based program shows costs of $6.11 per patient per day and another $9.45, both excluding the cost of physicians' visits.(93) Both costs quoted are considerably less than hospital or nursing home care.

Obstacles: Among the obstacles to the expansion of organized home care programs are the limited experience of physicians in using services by paramedical personnel in the home; the comparative convenience of hospital treatment; the present lack of insurance coverage for home care services. Other deterrents,

expressed at the 1960 Home Care Conference, include the reluctance of hospitals to assume leadership for promotion of community services -- especially when ample hospital beds are available -- and the obvious shortage of suitable professional personnel. These arguments may be valid in California as well, although the California Medical Association has recognized the value of organized home care, and urges its members to be "cognizant" of this development and participate in it. Doctor James Doyle emphasized that physicians must stress that coordinated home care is a supplement, and not a substitute for existing medical care patterns.(95)

Home Nursing Services

As of April 1965, 30 California counties provide total or partial coverage for nursing care of the sick at home. These services are provided by Visiting Nurse Associations, local health departments, or a combination of the two.

Current Utilization: Although it is difficult to identify completely the population groups served in each of these counties, an estimated 75 percent of the state's population reside in areas where such service exists. Some regions, such as San Francisco, San Mateo County, San Joaquin and Orange Counties, have total coverage, while other counties extend service only to selected communities or census tract areas.

As home nursing is comparatively new in the 18 counties served by local health departments, utilization data are not readily available for them. Table 18 indicates the scope of service provided by the Visiting Nurse Associations in California in 1963. It shows that 401,732 visits were made to an eligible population exceeding 11 million. Further analysis indicates that an average of 11 visits per year were made to each patient. (Because of variations in local agency classification of "new patients seen," this figure may not be valid. However, among staff familiar with this type of service it seems realistic.)

Although all agencies offering home nursing services have not segregated services rendered to persons with "special health problems," there is good evidence that between 60 and 70 percent of home nursing services currently available in California are provided to persons age 65 and older. As expected, the special health problems of this group are related to chronic illness and resulting disability.

In parts of the state where liaison has been closely established with local medical groups to advance continuity of care, use of home nursing services has increased. For example, a well organized program providing for discharge planning of patients while hospitalized stimulated nearly 100 referrals for home nursing service during the first quarter of the program.(96)

Table 18

NUMBER OF ADMISSIONS, NUMBER OF VISITS, POPULATION SERVED BY VISITING NURSE ASSOCIATIONS IN CALIFORNIA, 1963

COUNTY AND VISITING NURSE ASSOCIATION	ADMISSIONS	NUMBER OF VISITS	POPULATION SERVED
Total	35,876	401,732	11,632,144
Alameda County			
Berkeley	273	5,296	127,000
Oakland	2,070	19,875	900,000
Los Angeles County			
Claremont	110	1,328	19,800
Glendale	807	13,585	242,817
Long Beach	654	12,055	473,700
Los Angeles	7,505	75,922	3,750,000
Pasadena	1,268	16,325	500,000
Pomona	214	4,728	93,000
Whittier	535	5,859	200,000
Monterey County			
Monterey Peninsula	1,247	12,752	110,000
Orange County	783	11,440	1,000,000
Riverside County	1,207	9,307	150,000
San Bernardino County	195	6,962	214,925
San Diego County	1,630	29,591	1,033,811
San Francisco County	4,965	65,005	700,000
San Joaquin County			
Stockton	278	7,351	258,900
San Mateo County	10,107	47,654	508,000
Santa Barbara County	418	8,571	75,000
Santa Clara County	1,008	25,201	869,000
Stanislaus County			
Modesto	342	10,963	148,000
Ventura County	260	11,962	258,191

Sources: State of California Department of Public Health, Bureau of Nursing. Questionnaire for Visiting Nurse Associations. Berkeley, 1963.
Selected Visiting Nurse Associations in California. Annual Reports, 1963.

Projections: Unquestionably Medicare will greatly encourage home nursing services, since partial or total payment for these services is provided. Greatly expanded case loads will certainly occur. On the basis of the current Visiting Nurse Associations' experience, and assuming that medical care patterns, medical knowledge and organization of services remain that of 1963, an anticipated 848,029 home nursing visits could be made in 1975, to a population of 25 million. This projection implies an increase in manpower of 330 trained nurses just to maintain the status quo in this one dimension of care. Changes in medical and health patterns cannot help but shift the estimate upward. As local health departments increase their home nursing programs, they can bear some of the anticipated demand for service.

But any projections must consider the impact of shifts in organization of services, available manpower, medical discovery, and economic factors, to name but a few. As the concepts of out-of-hospital services and coordinated home care programs are advanced, the need to expand the present home nursing services and incorporate them into new patterns of care is dramatized; as medical technology reduces the extent of certain diseases or conditions, the need for home nursing services may diminish. Since home nursing service to the aged is now reimbursable through governmental resources, the current population and potential aged population will exert a tremendous demand on the present manpower supply. Increased funds will also support services to younger persons -- already taxing the available nursing power.

Economic Aspects: Data are available on costs per visit and sources of income of the California Visiting Nurse Associations. Comparable data on health department services are not available to date. In 1964, per visit costs ranged from $3.89 in Stanislaus County and $4.10 in Northern Santa Cruz County to a high of $9.61 in Contra Costa County. Costs in urban areas tended to be generally higher than those in rural districts, but as shown in Table 18 extent of service is also greater. Considerable variation was shown in the patient fees charged: in Contra Costa County, for example, a fee of $7.50 for the first half-hour was charged; per hour and per visit fees were as low as $4 per hour in Southern Santa Cruz County to as much as $7 per visit in Pasadena and $7 per hour in Los Angeles.(97) In all cases, however, these costs are far less than hospitalization or other institutional costs.

Income for home nursing services provided by all Visiting Nurse Associations in California totalled just over $3 million in 1964: just under half a million dollars was from patient fees; State and county medical care programs contributed about a million and a quarter dollars; and just over $900,000 came from community agencies such as United Fund. The balance includes insurance payments where applicable, gifts of voluntary health associations, and other miscellaneous sources.(98)

Any increase in utilization will obviously elevate current income, but costs in some communities may be lowered as volume of service increases.

Homemaker Services

It has long been recognized that many activities related to home health services can be appropriately and effectively provided by nonprofessional health workers given supervision and an organizational framework. This type of worker -- the homemaker or home health aide -- is an essential contributor in a fully integrated home care program. However, since definition of these activities does not conform to most community service plans, the need to establish definitions -- and standards -- is urgent.

Originally, homemaker services in California were provided by private social service agencies, giving care to children when the parent was out of the home. The advent of Chronic Illness and Aging funds through public health channels shifted the emphasis: Visiting Nurse Associations and county welfare departments began to tap this manpower resource for care of the chronically ill and aged when nursing or more extensive care was not required.

At the present time, information is not readily available concerning the population served by homemakers, staffing patterns or numbers of persons receiving homemaker care. The picture is complicated by the superimposition of the home health aide program upon homemaker services. Home health aides provide essentially the same services to adults, but also provide personal care to patients at home. Currently both types of personnel are being trained, and agencies providing such services may be reimbursed by county welfare departments.

Attendants, who give care to totally disabled patients, might also be considered here. However, attendants are not provided through an agency, so appropriate data are impossible to obtain. It is known that the average number of public assistance recipients who are totally disabled was 41,387 per month in fiscal year 1963-1964.(99) But the proportion receiving attendant care is not known.

Current Utilization: In 1964, 13 California counties, chiefly in urban areas, had homemaker services available. All reported use of the service and a "significant change" in case loads. Referrals are made both to and from health departments, private and government hospitals, and other official agencies.(100)

While it is difficult to identify the scope of population served by homemaker and related services, the experience of one community may illustrate the existing and potential utilization in the state. The Oakland Visiting Nurse Association provides homemaker-home health aide service for all of Alameda County. The homemaker service was established in 1963; 237 admissions were reported. In

1964, a home health aide service was added. The 30 homemaker-home health aides admitted 278 patients to service, the majority age 65 and over.[101] While there are about 80,000 persons in Alameda County in the older age group, it would be a fallacy to think that all of them need or want this type of service. Assuming that a tenth of them need and would use it, there would be a potential case load of 8,000. Compared to current admissions, about three percent of such a potential case load is presently being served.

Projections: In 1975, increased population will bring the population age 65 and over to close to 100,000 in Alameda County. To serve a tenth of this group, homemaker services would have to grow immeasurably. To provide the current level of care, only a few additional homemaker-home health aides would be needed.

Although service to the aged has been emphasized, homemaker services are not limited to that segment of the population. The program in Santa Clara County, 18 months is existence, reports only a quarter of its admissions from persons 65 and over; nearly a half are ages 20-44 and another quarter are ages 45-64.[102] If service to this type of case load proves typical, a broader population base should be considered in planning for manpower and utilization in 1975.

One of the strongest arguments for this type of service is that, when it is available, it permits patients to remain at home or return home early from an institution. The expense of these services, while not as great as institutional care, nonetheless has influenced growth. Maintenance and administrative costs have inhibited growth, especially in rural areas. However, funds from Medicare programs should have a positive effect on the use as well as availability of homemaker services.

By mid-1966, standards for home health aides were approved, and the training of many nonprofessional aides initiated, stimulated both by the demand -- and by funds from the Office of Economic Opportunity.

DENTAL SERVICES*

Meeting the oral health needs of California's urban-metropolitan population, in fact its entire population, 10 years hence is a challenge to public health and the dental profession. Oral diseases are rampant among California's population, as in the rest of the nation, and are already producing a monumental backlog of dental care needs. Neither oral disease attack rates nor dental care needs have

* This section, in a slightly different form, appeared as: Richards, L. F., O'Donnell, E. Oral Diseases and Services Reviewed and Projected. Calif Health, 23:27-32, 1965.

changed markedly in this country in the past 20 years. Nor will they change significantly in the next 10 years, unless preventive public health measures are adopted now -- by everyone in the population. As California's population size soars, the ratio of dentists to population will shrink. Matching the supply of dental services to the demand will be further strained by increased public awareness and education, improved living standards, and the greater ability to pay for dental care through dental insurance, prepayment, employee benefits, and public programs.

Few diseases are tolerated by the public with such apathy. As one of mankind's oldest ailments, dental diseases and tooth loss are still regarded as "inevitable as death and taxes." But with the technical knowledge available today, and application of recognized preventive measures, everyone could have his teeth for life. Achievement of this goal will not come in ten years; it will wait upon increased manpower resources and public education.

Current Dental Resources

In 1965, Californians had 12,273 dentists -- one for every 1,508 persons -- more dental care per patient than is available in the nation as a whole. The ratio is even more favorable in California's urban-metropolitan areas: one for every 1,472 persons. Four of the six dental schools in the West are located in California. However, there are diverging opinions whether a serious shortage of dentists will occur. While, some of the 58 counties have no dentists at all, the manpower resources may underestimate genuine need, for at present only 40 percent of California's adult population seeks needed dental care and 65 percent of our school-age children are known to need treatment.(103)

Present Status of Oral Health and Estimated Dental Care Needs in 1975

Oral health is the most neglected segment of total health in California's population. Oral disease affects 98 out of every 100 persons in this state.(103) This prevalence rate has remained static for many years. However, the sheer numbers so affected increase as the population does.

Of greatest concern is dental caries -- cavities -- not only because of the magnitude and prevalence, but recent evidence that dental caries is a "communicable" disease.(104) The ultimate significance of treating dental caries is the arrest and control of extended dental disease. Unlike other bodily tissue, once dental tissue is diseased, damage may progress -- destroying a tooth, spreading to adjacent teeth and bone. If discovered in time, mechanical removal of diseased tissue and tooth reconstruction can arrest dental disease. Without prompt treatment, reinfection can occur, and more serious dental disease permitted to run its course. Delayed treatment and failure to use proper preventive measures result in early tooth loss.

By age six, when the first permanent teeth have erupted, more than a third of California's children have at least one permanent tooth affected by decay. The number of children and average number of teeth so affected increase with each year of age. By age 17, 98 percent have an average of 12 permanent teeth affected by decay.(104)

Table 19 illustrates the prevalence of oral disease in California. Dental decay alone affects nearly 13 million persons. By 1975, this number can be expected to exceed 17 million, nearly 15 million in the urban-metropolitan areas of the state. Table 20 shows the projected prevalence of oral disease in the 10 urban areas.

Table 19

PREVALENCE OF ORAL DISEASES
CALIFORNIA AND ITS URBAN-METROPOLITAN AREAS, 1965, 1975

DISEASE	CALIFORNIA		URBAN-METROPOLITAN AREAS OF CALIFORNIA	
	1965	1975	1965	1975
Dental Caries[1]	12,868,726	17,215,522	11,129,275	14,798,201
Periodontal Disease	9,389,383	12,484,317	8,120,231	10,731,329
Oral Cancer	4,998	6,618	4,323	5,686
Deaths from Oral Cancer	629	833	544	716
Children with Malocclusion	2,341,515	2,916,095	2,025,015	2,506,631
New Cases of Cleft Lip and Palate[2]	449	618	388	535

1 Permanent teeth only; therefore population under age 5 excluded.
2 Incidence based on estimated live births.

Sources: State of California Department of Public Health, Division of Dental Health (Unpublished Data).
_____, Bureau of Vital Statistics, Personal Communication.
State of California Department of Finance. California Population, 1963, Table 8, p. 13-16.

Conservative estimates of dental care needs in the state suggest that, as of mid-year 1965, nearly 71 million teeth await the dentist's drill (see Table 21). Unless preventive measures are fully applied, by 1975, 95 million teeth will need restoration in California; 44 million will require extraction. Over 4 million persons will be edentulous and require full dentures; over 18 million will require partial dentures. By 1975, an estimated 12 million persons will require treatment for periodontal disease (gums). While not as gross in numbers as persons with dental caries, periodontal disease is very serious; it is the primary cause of tooth loss in adults.

Table 20

PREVALENCE OF ORAL DISEASES
URBAN-METROPOLITAN AREAS OF CALIFORNIA, 1965, 1975

URBAN-METROPOLITAN AREAS	DENTAL CARIES		PERIODONTAL DISEASE		CHILDREN WITH MALOCCLUSION		ORAL CANCER	
	1965	1975	1965	1975	1965	1975	1965	1975
Total	11,129,275	14,798,201	8,120,231	10,731,329	2,025,015	2,506,631	4,323	5,686
San Francisco-Oakland	2,167,400	2,769,816	1,581,395	2,008,610	394,367	469,172	842	1,064
San Jose	625,881	994,256	456,661	721,013	113,882	168,415	243	383
Sacramento	440,673	635,403	321,527	460,781	80,182	107,630	170	243
Stockton	194,004	240,793	141,551	174,618	35,300	40,787	76	92
Fresno	293,509	382,300	214,153	277,236	53,405	64,757	113	146
Los Angeles-Long Beach	5,515,354	7,164,008	4,024,157	5,195,178	1,003,541	1,213,494	2,146	2,753
San Diego	790,929	1,038,306	577,084	752,957	143,912	175,876	307	400
San Bernardino-Riverside	697,126	1,004,075	508,642	728,133	126,844	170,078	270	386
Santa Barbara	179,978	284,367	131,317	206,217	32,748	48,168	70	108
Bakersfield	224,421	284,877	163,744	206,586	40,834	48,254	86	111

Sources: State of California Department of Public Health, Division of Dental Health (Unpublished Data).
State of California Department of Finance. California Population, 1963, Table 8, p. 13-16.

Table 21

ESTIMATED DENTAL CARE NEEDS BY TYPE OF CARE
CALIFORNIA AND ITS URBAN-METROPOLITAN AREAS, 1965, 1975

AREA BY AGE OF POPULATION	TEETH NEEDING RESTORATION		EXTRACTIONS		PARTIAL DENTURES AND BRIDGES		FULL DENTURES[1]		INDIVIDUALS NEEDING TREATMENT FOR PERIODONTAL DISEASE	
	1965	1975	1965	1975	1965	1975	1965	1975	1965	1975
CALIFORNIA										
Total	70,673,031	95,008,335	32,701,617	44,101,649	13,547,469	18,621,350	3,091,170	4,141,345	9,389,383	12,484,317
5-17	17,795,514	22,162,322	2,809,818	3,499,314	a	a	a	a	2,435,176	3,032,738
18-44	38,434,164	53,724,762	13,915,818	19,452,069	9,277,212	12,968,046	662,658	926,289	3,313,290	4,631,445
45-64	11,418,819	15,117,134	12,155,517	16,092,434	3,315,141	4,388,846	1,473,396	1,950,598	2,431,103	3,218,487
65 and Over	3,024,534	4,004,117	3,820,464	5,057,832	955,116	1,264,458	955,116	1,264,458	1,209,814	1,601,647
URBAN-METROPOLITAN AREAS										
Total	61,120,239	81,667,719	28,281,377	37,909,106	11,716,273	16,006,629	2,673,340	3,559,836	8,120,231	10,731,329
5-17	15,390,114	19,050,396	2,430,018	3,007,957	a	a	a	a	2,106,016	2,606,896
18-44	33,239,063	46,180,986	12,034,833	16,720,702	8,023,222	11,147,135	573,087	796,223	2,865,437	3,981,120
45-64	9,875,351	12,994,459	10,512,470	13,832,811	2,867,037	3,772,585	1,274,239	1,676,704	2,102,494	2,766,562
65 and Over	2,615,711	3,441,878	3,304,056	4,347,636	826,014	1,086,909	826,014	1,086,909	1,046,284	1,376,751

[1] Includes full upper, full lower and both upper and lower dentures.

a Data too small to calculate.

Source: State of California Department of Public Health, Division of Dental Health. Dental Caries Surveys of California School Children, 1952-1956; Gingivitis Studies in Selected Communities, 1953-1957; A Study of Selected Dental Conditions and Related Needs in an Employed Adult Population, 1959.

Data are not available to indicate how many rheumatic hearts are further damaged by oral infection in children, nor the extent to which heart disease, arthritis or other systemic diseases are complicated by oral infection in adults. Oral cancer affects 27 out of every 100,000 adults in the state:[105] approximately 5,000 in 1965, but 6,600 in 1975. Unless drastic measures are taken, deaths from oral cancer will rise from 629 in 1965 to 833 in 1975. Early detection, through use of a simple smear test, can bring many cases to prompt treatment.

Oral diseases also affect mental and social health. Thousands of children and adults are psychologically handicapped by maloccluded teeth, malformed jaws and faces due to oral disease and/or developmental defects. As suggested in Table 19, nearly 3 million school-age children will need treatment for malocclusion in 1975.

One out of every 851 children in California is born with a cleft lip or palate -- or both.[106] In 1975, an estimated 600 such cases will be born; this does not include those born in the intervening years. Successful rehabilitation of the child so afflicted requires the coordinated efforts of many specialists.

Oral Health Requirements of Population Groups with Special Health Problems

Specialized dental programs are essential to bring dental care to increasingly large segments of the population whose general health predisposes augmented or unusual care. Until recently, the role of dentistry in the care of the handicapped, mentally and chronically ill, the aged and other special population groups has received little attention, and consequently little support. The concentration of medical care facilities in urban-metropolitan areas has attracted many of these persons, implying that specialized dental services should also be available there. New program development and legislation is beginning to focus on the dental needs of these special groups.

Chronically Ill and Aged: California has an aging population of more than 1.5 million persons. By 1975, there will be more than 2 million. At present, about 87,000 Californians are given care in long-term facilities, but data concerning those who are homebound are inadequate.[107]

The total care of the patient is not complete without correct and adequate dental care. The dental care needs of California's chronically ill and aged have never been completely assessed; however, a study conducted in Kansas City among a large population of both institutionalized and homebound patients found 60 percent were edentulous.[108] Of these with teeth, 90 percent had periodontal disease, and 85 percent of the normal complement of teeth were decayed, missing

or filled. A quarter of these patients were not dentally treatable. Of the 2,408 patients for whom treatment was recommended, 13 percent needed denture repairs, 10 percent partial dentures, 26 percent full dentures, 1,600 teeth needed fillings and about 4,000 teeth needed extraction.

Teamwork has been the backbone of increasingly effective care of the chronically ill and aged. Several types of community programs to provide dental care for this group have been successfully demonstrated: transporting patients to a central facility or dentist's office; bringing portable dental equipment to the home. Most innovations to improve dental care among this group are more economically feasible in urban-metropolitan areas, and hence suggest an array of possible means to meet the dental health requirements of California's chronically ill and aged.

Mentally Retarded and Handicapped: California's mentally retarded comprise about 360,000; epileptics, 90,000; cerebral palsied, 27,000.(109) Although there are no reliable estimates of the total handicapped, the California Health Survey found almost 2 million Californians disabled sufficiently to curtail wage-earning capacity or normal living functions.

Successful provision of dental care depends upon the degree of cooperation the patient can give, available facilities and specialized treatment procedures. There are no estimates of dental manpower with specialized skills. About one-third of California's licensed hospitals have dental facilities.(110) However, no data are available on providing for dental services under general anesthetic or other specialized treatment procedures. Until knowledge is acquired about the specialized manpower skills and facilities to render care, little can be done to plan effectively to meet the dental needs of the mentally retarded and handicapped.

Migratory Farm Workers: While dental care of this group has usually been ascribed as a "rural problem," the urban community often shares it for part of the year. Full dental care for children under 18 has been provided under the Public Assistance Medical Care program, but local welfare residency requirements often exclude the migrant worker.

During the first year of the Farm Workers Health Service, dental examinations revealed multiple neglected dental caries affecting a distressingly large number of children. Migrant families are forced to ignore dental health for financial reasons, and characteristically only seek help for pain or infection. With a farm labor population of up to 300,000 -- plus dependents -- the magnitude of this problem is enormous.(111) To even begin to meet the dental care needs, knowledge should be gained on the most effective ways of applying dental health education, preventive and treatment procedures.

Dentally Indigent: Often the most neglected segment of our population is persons who are economically marginal and yet do not qualify for welfare aid. Dental care tends to be ignored by such persons who find the cost prohibitive. Those in urban-metropolitan areas may be more affected than elsewhere, for while dental care is more available there, its cost is higher.

Table 22

UTILIZATION OF DENTISTS' SERVICES BY TYPE OF SERVICE AND SELECTED DEMOGRAPHIC AND SOCIAL CHARACTERISTICS UNITED STATES, 1957-1958, 1962-1963

SELECTED CHARACTERISTICS	TYPE OF SERVICE				
	All Visits	Extraction	Filling	Examination, Cleaning, Straightening and Gum Treatment	Denture Work, Other and Unknown
	AVERAGE ANNUAL NUMBER OF DENTIST VISITS PER PERSON FOR SPECIFIED TYPE OF SERVICE				
All Persons	1.6	0.3	0.7	0.4	0.3
Residence					
Urban	1.9	0.3	0.8	0.4	0.4
Rural Nonfarm	1.2	0.2	0.5	0.3	0.2
Rural Farm	1.0	0.3	0.4	0.2	0.2
Region					
Northeast	2.2	0.3	1.0	0.5	0.4
North Central	1.6	0.2	0.7	0.3	0.3
South	1.0	0.3	0.4	0.3	0.2
West	1.8	0.3	0.7	0.5	0.4
Color					
White	1.7	0.3	0.8	0.4	0.4
Nonwhite	0.5	0.2	0.1	0.1	0.1
Education of Family Head					
Under 5 Years	0.8	0.2	0.3	0.1	0.2
5 to 8 Years	1.2	0.3	0.5	0.2	0.3
9 to 12 Years	1.6	0.3	0.7	0.4	0.3
College	2.6	0.2	1.2	0.8	0.5
	PERCENT OF ALL DENTAL VISITS				
Family Income					
Total	100.0	17.0	43.0	22.6	20.9
Under $2,000	100.0	37.1	27.4	15.0	22.5
$2,000-$3,999	100.0	23.0	35.6	17.6	27.0
$4,000-$6,999	100.0	16.4	46.5	2.3	18.9
$7,000 and Over	100.0	9.9	45.7	28.2	20.9

Source: U.S. Public Health Service, U.S. National Health Survey. Dental Care Interval and Frequency of Visits, U.S., July 1957-June 1959. PHS Pub 584-B14; and Dental Care, Volume of Visits, U.S., July 1957-June 1959. PHS Pub 584-B15. Washington, U.S. Department of Health, Education, and Welfare, 1960.

Many solutions are being developed, with success. Prepaid and postpay dental care plans have simplified budgeting for care, as in medical plans: patient membership in the California Dental Service reached a half-million this year;[112] the Post-Payment Plan for Dental Care of the California Dental Association enabled 14,000 patients, paying $5 million, to have care.[113] However, even with increasing numbers of prepaid and postpaid plans, the oral health needs of the dentally indigent have not been met. Services are not available throughout the state, and even where they are, this group is not generally aware of the resources.

Utilization of Dental Care Services

In spite of existing factors producing underutilization of dental services today, there are firm trends indicating than an increased demand for services will result in a deficit of dentists. The estimated 14,836 practicing dentists in 1975 will, in view of population projections, have pushed the ratio to one dentist for every 1,682 persons. There is every evidence that other factors will boost the demand for dental services: higher personal income, increased numbers of persons who are well-educated and in the "white collar" professions. People with more money, more education, and more professional occupations spend more on dentistry (see Tables 22 and 23).

Table 23

DENTAL EXPENSES PER PERSON
PER YEAR IN DOLLARS
UNITED STATES, JULY-DECEMBER 1962

FAMILY INCOME	DENTAL EXPENSES PER PERSON PER YEAR
Total	$19
Under $2,000	9
$2,000-$3,999	11
$4,000-$6,999	16
$7,000 and Over	29

Source: U.S. National Center for Health Statistics. Medical Care, Health Statistics, and Family Income, United States. PHS Pub 1000, Series 10, No. 9. Washington, U.S. Department of Health, Education, and Welfare, Table 2, p. 44.

To meet the demand for dentistry, dental manpower resources will have to be extended, by increasing the quality, number and use of trained paradental personnel -- dental hygienists, assistants and laboratory technicians (see Table 24). Dental hygienists, with only two years of training, can perform routine tasks which occupy up to 25 percent of a dentist's time (cleaning teeth, taking X rays, applying fluoride treatments, patient education). Although California does have 4 of the 48 accredited dental hygiene schools, and the ratio of hygienists to dentists should become more favorable, one survey has indicated that fewer dentists in the Far West tend to use hygienists than in the nation at large, 3.4 percent compared to 6.7 percent.(114) Dental assistants have a useful function, but great discrepancies exist in training requirements. The majority of practicing dental assistants are not certified and have on-the-job training only. California is promoting consistent training by having 17 of the 22 accredited 2-year schools and 6 of the 34 accredited 1-year schools. As estimated 82 percent of dentists in the Far West use the services of a dental assistant.(114) The dental laboratory technician makes prosthetic appliances according to a dentist's written prescription. Two of the 5 certified dental laboratory technician's schools offering a 2-year curriculum are in California, although only 13 percent of employed technicians have completed a 1- or 2-year course. At present, an estimated 66 percent of all laboratory work in the Far West is sent to commercial laboratories. (114)

Table 24

DENTAL MANPOWER
CALIFORNIA, 1954, 1964, 1975, 1980

YEAR	DENTISTS	POPULATION PER DENTIST	DENTAL HYGIENISTS	HYGIENISTS PER 1,000 DENTISTS
1954	8,650	1/1,450	622	71.9
1964	12,273	1/1,508	2,007	163.5
1975	14,836[a]	1/1,652	3,239[a]	218.3
1980	16,000	1/1,759	3,800	237.5

[a] Interpolated estimate.

Sources: State of California Board of Dental Examiners.
Victor A. Hill. A Profile of Dental Manpower in California. J Calif Den Assn 41:102, 1965.

A dental resource which has not been well studied is the dental clinic, its location, availability and use. Although licensed, the current standard reflects the existence only of dental equipment. The full potential of dental clinics, through adequately trained personnel and established standards, has yet to be realized.

Economic Aspects of Oral Health Requirements

The financial resources of almost every family in California are affected by oral disease. Conservatively speaking, Californians spent over $508 million for private dental care in 1964. The California Dental Service reports an estimated $11,600,000 in direct payments to dentists for services to over 135,000 patients. (112)

The State spent over $11 million for dental care under its two large welfare programs (see Table 25), and spent nearly $2 million for the dental care of institutionalized persons (1963-1964). No estimate is available of expenditures by local governments or private agencies.

Table 25

PUBLIC ASSISTANCE MEDICAL CARE EXPENDITURES
FOR DENTAL CARE, BY ASSISTANCE PROGRAM
CALIFORNIA, 1964

ASSISTANCE PROGRAM	AVERAGE MONTHLY NUMBER OF RECIPIENTS	TOTAL EXPENDITURES
Total	802,729	$11,509,573
Old Age Security (OAS)	268,454	4,527,890
Aid to the Blind (AB)	11,899	201,960
Aid to the Needy Disabled (ATD)	43,787	1,529,416
Aid to Families with Dependent Children (AFDC)	478,589[a]	5,250,307[b]

[a] Adults and children.
[b] Includes approximately $100,000 for emergency dental care of adults.

Source: State of California Department of Social Welfare, Division of Research and Statistics, Medical Care Research Bureau. Memo, October 29, 1965.

These figures do not include the impact of wage loss due to oral disease, however. While specific data are not available, morbidity and days lost from normal activities would be considerable in view of oral disease prevalence in the state's population.

Estimated Cost of Needed Care: Notwithstanding the present large expenditures for persons obtaining dental care, what would California's bill be, if all of its dental care needs could be met? As shown in Table 26, the dental bill for California would in 1965 exceed $4 billion. This would rise to nearly $6 billion in 1975, the preponderance spent in urban-metropolitan areas.

Table 26

ESTIMATED COST OF OPERATIVE AND PROSTHETIC DENTAL CARE NEEDED
CALIFORNIA AND ITS URBAN-METROPOLITAN AREAS, 1965, 1975

TYPE OF CARE	CALIFORNIA		URBAN-METROPOLITAN AREAS	
	1965	1975	1965	1975
Total	$4,236,676,010	$5,768,945,673	$3,664,009,336	$4,958,897,688
Restorations	925,816,706	1,244,609,188	800,675,130	1,069,847,118
Extractions	284,831,084	384,125,362	246,330,793	330,188,313
Partial Dentures and Bridges	2,475,799,959	3,403,051,712	2,141,148,890	2,925,211,449
Full Dentures	550,228,260	737,159,410	475,854,520	633,650,808

Sources: Table 21 and 1964 State of California Department of Social Welfare Fee Schedule.

Reduction of the Dental Care Bill: Quite obviously, care alone is not the only means of controlling oral disease. In fact, prevention of oral disease and its progressive course is the only reasonable means of reduction. Proved, safe, inexpensive and effective public measures are presently available for widespread reduction of oral disease.

Up to 65 percent of dental caries can be prevented by the ingestion of proper amounts of fluoride during the period of tooth formation.(115, 116) The cost of fluoridating community water is considerably less than the cost of dental care: 10 to 15 cents per person each year compared to $19 (see Table 23). A second method of fluoride ingestion is by tablets or solutions, which requires prescription and is far more costly ($1.50 to $15 per person per year); for effectiveness, ingestion must be daily from birth for 10 or 15 years. Yet another method of preventing new cavities is topical application to erupted teeth by a dentist or hygienist.

While fluoridation of public water supplies has been proved unequivocally as the preferred and most effective method of caries prevention, well-organized and generously financed antifluoridation groups have leveled imaginative and unfounded charges to confuse and frighten the public.(117) The consequent failures of fluoridation referendums indicate that this simple route to dental caries prevention will be a difficult process of education and support, and that at present alternative, less effective and more expensive methods of supplying fluoride to growing children must be used.

The prevention of periodontal disease can circumvent most early tooth loss in adults and help maintain natural dentition for life. The effective use of a toothbrush, an inexpensive tool, can prevent most of gum tissue disease, averting the "inevitable" cost of dentures.

While the causes of oral cancer and oral facial development deformities are not known, early detection and prompt treatment can prevent oral cancer deaths and avoid the delayed development of children handicapped at birth.

Summary

To meet the oral health requirements of Californians, efforts should be concentrated upon:

1 intensified promotion of presently known effective preventive measures;

2 increasing dental manpower resources;

3 programs established to provide dental care for those groups with special health problems;

4 mass screening for early detection of oral cancer;

5 increased use of prepayment dental plans and development of additional economic aids for the "dentally indigent;"

6 increased dental health education of the public to effect more efficient use of dental care resources and to gain acceptance of oral disease preventive measures.

ANCILLARY PERSONNEL

Many other types of personnel, in addition to the physicians, nurses, dentists, and pharmacists mentioned in foregoing sections, play a part in the total spectrum of health care. If everyone who is connected in any way with health maintenance is included, the list becomes almost unmanageable: researchers, statisticians, medical writers and illustrators, sanitarians, dieticians, administrators, educators in basic sciences and the health professions, and many others. The present discussion is limited to those who perform some rather direct personal health service. The best and most recent estimates available for California are shown in Table 27.

In addition, 745 ambulances are licensed in California,[118] and there are 345 dispensing optical firms (including branches).[119]

Many of these data are on the conservative side. For example, a psychologist or counselor need not be certified and registered with any agency unless "he holds himself out to the public" (i.e., advertises) and accepts remuneration. Under present California law, X-ray technicians need not meet any particular

Table 27

ANCILLARY HEALTH PERSONNEL RENDERING PERSONAL SERVICES

(MOST RECENT DATE AVAILABLE)

PROFESSION	ESTIMATED NUMBER	*SOURCE*	*YEAR*
Clinical Laboratory Technicians	8,000[a]	*State of California Department of Public Health, Division of Laboratories*	*1965*
X-Ray Technicians	5,000[a]	*State of California Department of Public Health, Bureau of Radiological Health*	*1965*
Chiropractors	4,825	*State of California Board of Chiropractic Examiners*	*1965*
Physical Therapists	2,873	*State of California Board of Medical Examiners*	*1963*
Optometrists	2,747	*State of California Board of Optometry*	*1965*
Psychologists	2,287	*State of California Board of Medical Examiners*	*1963*
Christian Science Practitioners and Nurses	2,000	*Christian Science Jrnl 83:55-66, 1965*	*1965*
Marriage, Family and Child Counselors	1,145[b]	*State of California Board of Social Work Examiners*	*1965*
Podiatrists	827	*State of California Board of Medical Examiners*	*1963*
Occupational Therapists	600	*San Jose State College Department of Occupational Therapy*	*1965*
Drugless Practitioners	59	*State of California Board of Medical Examiners*	*1963*
Midwives	9	*State of California Board of Medical Examiners*	*1963*

[a] Excludes an estimated minimum of 10,000 others -- nurses, dental technicians, etc. -- who occasionally perform X-ray tasks.

[b] This figure is not mutually exclusively from psychologists.

standards or be registered with any agency. In some cases, not even a crude estimate is available on certain types of ancillary personnel. For example, no one knows the exact number of psychiatric social workers in California.

Little is known about utilization rates of the services provided by ancillary personnel, or the costs involved. Traditional medical care studies are largely confined to physicians' services, hospitalization, drugs, and dental care. To the extent that other personal services are included at all, they are lumped in a residual category. For example, the National Health Survey of July-December 1962 combined expenses for eyeglasses, hearing aids, special nursing, physical therapy, speech therapy, corrective shoes, chiropractors' fees, special braces, trusses, wheelchairs, artificial limbs, ambulance service, emergency outpatient care, laboratory fees, and "similar services." The average expenditure for this potpourri was $11 per person per year.(120)

A much more refined breakdown is available in a special study of Old Age Security recipients in Santa Cruz County.(121) This study disclosed that, in 1961, this special population group averaged expenditures of about $26 per person per year for eye care (other than ophthalmologists), chiropractors, podiatrists, X-ray and laboratory services, ambulance, and other ancillary services: roughly 5 percent of all health expenditures. It is probable that in the general population ancillary services account for somewhat less than 5 percent of the total, since several of the major forms of ancillary care may be expected to be in particular demand by the elderly.

Projections

The future can be discussed only in the roughest, impressionistic terms. It may be postulated that society will probably become increasingly sophisticated and secularized medically, with an attendant decline in the use of chiropractors, naturopaths, herbalists, faith healers, and the like. But physicians will make increasing use of nonmedical technicians, therapists, and analysts -- including a relatively new class of computer programmers. It may be postulated that the demand for psychologists and counselors of various types will be greater than ever.

There is a need for much more information about ancillary health personnel. Five percent of the costs of medical care may sound like a small fraction, but it amounts to well over a billion dollars a year nationally, and over 100 million dollars in California. Utilization and cost data on ancillary health services should be included in future medical care studies.

Professional standards should be set for all personnel who are in a position to affect the health of individuals including, in addition to the groups already mentioned, hospital and nursing home administrators. These personnel should be

examined, certified, registered and licensed, in much the same manner as physicians and surgeons, dentists and other professionals. Finally, it should be possible to devise ways to reduce the fragmentation which presently spreads responsibility for standard-setting and surveillance of health personnel among so many state departments and agencies.

DRUGS

The California Board of Pharmacy reports that there are 12,545 registered pharmacists in California at the present time. The prescriptions which they dispense are a major part of the spectrum of health care.

Data are not available on the average number of prescriptions and refills which Californians purchase in a year, or their cost. However, the 1962 National Health Survey indicates that prescriptions and other medicines account for about 20 percent of the total costs of medical care -- an average, nationally, of about $26 per person per year.(122) (This definition includes "nonprescribed" items such as tonics, ointments, vitamins, sedatives and analgesics.)

There is no reason to doubt that the medical care dollar is divided in approximately the same proportions in California. Drugs probably account for about a fifth of the total in this state, as elsewhere. However, the costs are probably substantially higher in California. The Bureau of Labor Statistics reports, for example, that the average family in the Los Angeles area spent $450 for medical care in 1961 -- highest of any metropolitan area in the country. The average in San Francisco was $426 -- second highest in the country.(123) Twenty percent of drugs would mean about $90 per family per year, or about $30 per person.

The Consumer Price Index for drugs has remained quite stable for several years. Using 1957-1959 as a base period, in 1963 the drug index stood at 98.7 compared to 114.4 for physicians' fees and 138.0 for hospital room rates.(124) Even assuming the drug index remains relatively stable, however, it may be anticipated that per capita expenditures for drugs will rise in the foreseeable future, because the use of prescriptions is increasing and will probably continue to do so, and drug costs appear higher in California. Although the per unit cost of drugs declined between 1958 and 1963, personal consumer expenditures for drugs rose by more than 30 percent through the nation.(125)

PROSTHESES AND APPLIANCES

A prosthetic device may be defined as an aid to assist or replace a part of the body which is missing or malfunctioning. Under this rubric are hearing aids, eyeglasses, artificial limbs, braces and trusses, crutches, walkers, wheelchairs and many other devices.

Such items, which often cost several hundred dollars, may figure prominently in the medical care costs of populations at risk -- particularly the elderly. However, very little is known about the extent to which prostheses are used or how much they cost. The best information currently available is from the National Health Survey of July-December 1962. The questionnaire specifically inquired about expenses for many of the major types of prosthetic devices. Unfortunately, however, the resulting tabulations combine cost data about prostheses with that of some ancillary health services (see ANCILLARY PERSONNEL). All that is known is that expenditures for the entire miscellaneous category averaged $11 per person per year, and that expenses for eyeglasses accounted for approximately half of this amount.(126) If one assumes that other prostheses accounted for another 15 or 20 percent of this amount, and that national ratios may be applied to California with dollar amounts that are somewhat higher, it is estimated that Californians spend roughly $9 per person per year on prosthetic devices and appliances. This is about $160 million in the aggregate -- more than 5 percent of the total cost of health care. There is no immediately apparent reason to believe this proportion will be affected upward or downward in the coming decade.

Chapter 4

ORGANIZATION OF PERSONAL HEALTH SERVICES

The current organization of personal health services reflects three important influences. First is the traditional method of medical practice: individual physicians serving patients on a fee-for-service basis in their offices and admitting patients to hospitals as needed. Second is the technological advance in medical science which has occurred in the past few decades, leading to specialization of physicians and construction of elaborate facilities for the care of patients. Third is the growing social awareness of what medicine can accomplish and the corresponding increasing acceptance of public responsibility to assure medical services for all persons who need them.

Personal health services are still largely provided by physicians practicing in their individual offices, dentists in theirs, and an array of other health personnel assisting them in care of patients outside of the hospitals. More formal and extensive organization of health services exists within hospitals and other health facilities.

Specialization of medical practice has led to fragmentation of the patient; that is, a division of responsibility for several types of illness among different physicians. One response to this specialization of medical practice and fragmentation of the patient has been the development of group practice, in which physicians of several specialties associate themselves in order to provide more comprehensive care. Recently, the medical profession and others have recognized the need to reestablish the personal physician as the one who sees the patient as a whole. Hospital practice has become more and more limited to physicians with appropriate special training, with sharp demarcation of surgical, obstetrical, pediatric and other services. The practice of the personal physician in the hospital has been reduced, on the grounds that he is not competent to provide services in the specialized fields.

Growing public awareness of the importance of medicine to maintain health has also had an impact on the organization of personal health services. In California, this has led to the development of a strong system of county hospitals which serves persons unable to pay for care out of their own resources. Most counties in California have established their own hospitals, but in some cases contract with community hospitals to provide bed care for patients as needed. They have supplemented inpatient services with outpatient care, provided in clinics or increasingly in the offices of private practicing physicians paid for by public funds. Approximately one-fifth of the general medical care in California is provided

through county hospitals or public welfare payments. In addition to care provided through tax resources, an increasing amount of personal health service is provided through group insurance or prepayment mechanisms; most hospital care is now obtained in this manner and an increasing proportion of care outside the hospital is also supported by these mechanisms.

This organization of personal health services is the framework for the current pattern of obtaining care. People who can afford to pay their own way, or who are covered by health insurance or prepayment programs, seek their care from private physicians in individual offices or in group practice. Most families where the head of the household is employed and having reasonable family income obtain their care in this manner. However, the approximately one-fifth of the population in the lowest socioeconomic level must obtain hospital care through the county hospital system, and they generally obtain physician care from that segment of the medical profession that is willing to treat patients at the lower fees paid in public assistance programs. This lower one-fifth of the population consists to a considerable extent of Negroes and other minority groups, elderly persons living on low incomes, and the unemployed or marginally employed, and their families.

California, thus, has in effect a dual system of personal health services: one serving approximately four-fifths of the population and one serving approximately one-fifth who are separated on socioeconomic, ethnic grounds.

The extremely slow progress in absorbing Negroes and other ethnic minority groups, elderly persons and the unemployed or marginally employed into the mainstream of life and the economy naturally favors the continuation of the dual system of personal health services within the state. However, those responsible for planning -- in government, in the health professions, and in the health industry generally -- are coming to realize that it is possible to overcome the segregation of medical care. This possibility arises because of increasing public responsibility in appropriating funds to pay for medical care as an essential in the life of every person in the state. The tendency for these funds to be derived largely from Federal and State sources relieves local government of the obligation to support facilities for the low-income groups.

Under Medicare, it will now be possible to convert the county hospitals into community hospitals. This requires admission of patients to the county hospitals irrespective of the source of payment for their care -- not limiting admissions to indigents -- and thus county hospitals will have admitting policies similar to those of voluntary hospitals. On the other hand, some of the approximately one-fifth of the population that hitherto has received its care only in county hospitals will now be able to obtain care in hospitals of their choice in the community.

Overcoming this dual system of care is the major step to be taken in California during the next few years toward the improved organization of personal health services. In addition, attention must be given to the improved organization of physician services. Some advocate the development of group practice associated with hospitals and coupled with prepayment mechanisms as the most efficient way of providing modern medical care. Others favor the continuation of individual practice as a means of preserving the important personal physician-patient relationship. While the latter theoretically can be accomplished within group practice, the fact is that in some of the large group practice organizations in California it has not been achieved. The public generally seems to have lessening regard for the idea of a personal physician, as evidenced by growing numbers of persons obtaining care from group practice organizations and emergency services of hospitals. Surveys of the general population indicate that as many as 21 percent of adults cannot name a personal physician.[127] In spite of this feeling on the part of the public, reflecting urbanization, mobility and other current social trends, many in the health field are increasingly concerned about the reestablishment of a personal physician-patient relationship as the core for the organization of good medical care.

Thus, a major problem appears to be the proper arrangement of physicians in practice in order to obtain the benefit of specialization and -- at the same time -- preserve the personal physician-patient relationship.

Chapter 5

THE ROLE OF PRIVATE ORGANIZATIONS AND GOVERNMENT IN PERSONAL HEALTH SERVICES

INTRODUCTION

Private practicing physicians and voluntary hospitals have been responsible for providing the bulk of personal health services in California, as in the rest of the United States. Dentists and other health personnel, and health facilities other than hospitals, have similarly functioned primarily within the private sphere of the economy.

Government -- Federal, State and local -- for some years has contributed about one-fourth of all expenditures for personal health services.(128) State Government in California, as elsewhere in this country, has taken primary responsibility for care of the mentally ill, and for establishing statewide policy for the provision of health services to persons of low incomes. In California, county government has been responsible for the development of the county hospital system, including general hospitals for the care of persons unable to purchase health services privately and for the care of persons with tuberculosis. Government has developed several new programs in recent years: for example, Medical Assistance for the Aged and now Medicare, initiated by Federal legislation, and community mental health services initiated by State legislation. Overall government expenditures, however, have just about kept pace with the expansion of personal health services in the private sector of the economy.

Several important trends should be noted in the provision of personal health services under private auspices. One is the growth of proprietary interest in facilities. Nursing homes for long-term care of chronically ill patients are largely under proprietary operation, with local government operating about one-sixth of the long-term beds in the state as a part of the county hospital system.(129) Also during the past twenty years, proprietary hospitals have been established, particularly in fast-growing communities where physicians have had urgent need for hospital beds to care for their patients and where older voluntary hospital groups have not moved rapidly enough to meet the needs. Often these proprietary hospitals provide minimum facilities with a small number of beds -- contrary to policies for hospital development recommended by all official and voluntary planning bodies.

PRIVATE SECTOR

Private practicing physicians and the voluntary hospitals comprise the bulk of providers of health care. Government has operated certain facilities for the care of the poor and for persons suffering from particular kinds of illness, such as tuberculosis and mental illness. Private physicians and voluntary hospitals have assumed some responsibility on a charity basis for the care of persons unable to purchase it out of their own resources. Increasingly, however, government has established programs to pay for care for those unable to provide it themselves, this care being rendered by private physicians and private (voluntary or proprietary) facilities. Government purchase rather than government operation of health service is rapidly becoming the predominant pattern.

Besides providing the bulk of care in the past and present, practicing professional persons in the health field through their organizations, hospitals through the American Hospital Association, and counterpart state organizations have undertaken another important responsibility with respect to health service: namely, the formulation of standards of care. Notable has been the establishment of criteria for approval of hospitals and a system for approving hospitals which meet the standard, initiated by the American College of Surgeons and continued under the Joint Commission on Accreditation of Hospitals. This has been probably the outstanding example of work toward the quality of health care through organized efforts, apart from that carried by educational institutions. Within the state, the California Medical Association and the California Hospital Association have taken the lead in formulating standards of performance and ethical relationships -- in many instances setting the pace for the rest of the nation.

Organizations of other professional health workers, particularly dentists and nurses, have also worked to elevate the standards of service provided by persons in those professions.

A peculiarly American development has been voluntary health organizations, such as the Tuberculosis and Health Association, the Cancer Society, Heart Association and others, which have brought together professional and lay persons interested in particular disease problems. These voluntary health organizations have focused attention on standards of care -- through the attention given by physicians particularly interested in cancer, heart disease, tuberculosis and the other conditions for which voluntary health efforts have been undertaken. For example, the Tuberculosis and Health Association over the years has been responsible to a considerable extent for the development of better services by government for the care of persons with tuberculosis. The Committee on Cancer of the California Medical Association and the American College of Surgeons have

both been concerned with the development of standards, and the approval of facilities meeting these standards, for the diagnosis and treatment of patients with cancer. Now more than 70 such institutions have been approved in California.(130)

All of these private organizations, both those of the professions and those devoted to particular disease conditions, have also sponsored public educational programs. Voluntary health organizations have been especially active in this direction, carrying out educational programs in connection with their fund raising activities and entering into many special educational projects.

As noted above, the principal role of the private sector has been the actual provision of services. It appears likely, and most feel desirable, that the health professions and the health facilities continue to operate within the private sector of the economy, with government purchase of services for particular categories of individuals as determined, from time to time, by public policy. The trend both nationally and within California is to minimize the direct operation of health facilities by government; rather to convert these services so far as possible into the private mainstream of care.

GOVERNMENTAL SECTOR

Government -- Federal, State and local -- has been taking an increasing interest in health, for a variety of reasons. One is the rising cost of services for which government has assumed responsibility. Rates of payment to hospitals, physicians and other providers of care have been increasing, with impact on governmental expenditures as well as expenditures within the private sector of the economy. Another and perhaps more fundamental reason for governmental interest in health has been the rising expectations of people for personal health services. When medical care could accomplish relatively little, the services of physicians and other health personnel were desirable but not regarded as essential. Now, with advances of medical science and the real possibility of avoiding premature death and disability, medical care has become vastly more important to people. They expect government to assure its availability to all persons who may need it.

Federal Government

In recent years, the Federal Government has shown greater willingness to appropriate funds for expanding personal health services. It has increased appropriations for purchase of medical care as a part of public assistance programs, and for developing new patterns of health services for particular problems such as maternal and child health. Most recently, Medicare for the elderly has been developed. One can assume, and it does seem appropriate, that the Federal Government will take an increasing share of responsibility for appropriating

funds for personal health services. Not only may the Federal Government take on some of the responsibility previously assumed by local and State Government, but now the Federal Government will extend itself through Social Security into payment for health services for persons not previously covered by governmental health benefits. At the same time, there are increasing signs that the Federal Government will divest itself of responsibility for direct operation of health services, as in the current efforts to curtail Veterans and Public Health Service hospitals.

Until the Medicare legislation, the Federal Government did not concern itself much with standards for the quality of personal health services for which it was providing funds. In the Medicare legislation, for the first time, the Federal Government has indicated that it will establish national minimum standards for those aspects of care which it will pay for.

Another important responsibility of the Federal Government in the health field has been to appropriate funds to the States, primarily through the Hill-Burton Hospital Planning and Construction program, for the expansion of needed health facilities. In California, the Federal Government contributes one-third toward the cost of projects which have a high priority within the State Plan for development of hospital and related facilities. The State contributes a second one-third, and the local sponsoring agency -- government or voluntary -- contributes the final one-third. Over the years, the Federal Government has broadened the scope: these funds may be sought to build various types of health facilities and more recently to modernize old plans.

Perhaps best known to the public and most important to medical schools is the role of the Federal Government to support research. The National Institutes of Health have become one of the most prominent arms of government supporting scientific research. NIH expends approximately half a billion dollars each year for health research.(131)

In accord with its general responsibility for international affairs, the Federal Government has undertaken some responsibilities for improving international health. This has included participation in the World Health Organization and other international health efforts, as well as bilateral agreements for the support of health work in particular countries, for example, through the Agency for International Development.

State Government

In keeping with its constitutional responsibility for protective services, State Government, particularly in California, has undertaken the important function of planning for health services and facilities to meet the needs of an expanding population.

The Governor's Committee on Medical Aid and Health, during 1960, conducted an exhaustive study of health conditions and health services in California, disclosed in the report, Health Care for California. This report covered the organization of health services, payment for them, hospitals and other health facilities, health manpower, and the needs of population groups with special health problems. This report has served as a guide for many health measures adopted in California in recent years, including:

1 specific planning for the development of sufficient numbers of physicians, dentists, nurses and other health professionals -- assigned by legislation to the Coordinating Council for Higher Education;

2 regional planning of hospitals and related health facilities, embodied in legislation originally passed in 1961;

3 development of specific health programs, as for seasonal agricultural workers and their families (in which California has been a national leader);

4 establishment of a program of medical care studies in the State Department of Public Health;

and many other measures.

The Coordinating Council for Higher Education has completed reports on medical education and dental education and is currently studying nursing education.(132) Recommendations by the Coordinating Council are already being used to guide the expansion of medical education resources of the University on its several campuses, as well as to plan the further development of private medical schools in the state.

Beginning in 1961, following enactment of regional hospital planning legislation that year, California has been involved in a cooperative governmental-private partnership for the planned expansion of hospitals and related health facilities in the major regions of the state. Thus far, regional hospital planning has been initiated in the San Francisco Bay Area, Los Angeles Metropolitan Area and Southern San Joaquin Valley Area, with both State Government and voluntary efforts; and in the Sacramento, San Diego and other regions through voluntary efforts alone.

Legislation passed in the 1965 session of the Legislature continues this partnership, by designation of a single statewide regional planning agency to work in cooperation with voluntary planning bodies now functioning in the state. Besides

mobilizing public and professional interest in the matter, assembling and assessing data to guide planning efforts in their regions, the regional planning bodies have also been influential in encouraging the development of hospital facilities which conform to the regional plan and discouraging the construction of hospitals which do not conform to such plans.

A long standing key responsibility of State Government has been the licensing of physicians, dentists and other health personnel. This is accomplished through various boards located within the State Department of Professional and Vocational Standards. In addition, the State Department of Public Health is involved in the certification of certain personnel such as laboratory technicians and public health nurses. The Department also carries responsibility for setting standards and licensing institutions which meet the standards for health services. The State Department of Mental Hygiene licenses private mental institutions, as well as operating the State hospitals for the mentally ill.

Besides actual licensing, California State Government has been involved in setting standards for certain types of services which are beyond licensure requirements. For example, the State Department of Public Health has established standards for hospitals to provide care for the particular conditions eligible for Crippled Children Services, and formulated standards for rehabilitation facilities used by the State Department of Social Welfare in the Public Assistance Medical Care program. Approximately 242 hospitals within the state have met the standards for participation in Crippled Children Services,(133) and approximately 20 hospitals have certified rehabilitation facilities.(134)

Like the Federal Government, State Government also contributes considerable funds for health services -- in part to match Federal monies for various health programs. These health programs are now located in the several departments within the State Health and Welfare Agency -- Public Health, Social Welfare, Mental Hygiene and Rehabilitation.

Another important responsibility of State Government is the provision of technical advice and consultation to local governmental and private agencies concerned with health. Certain problems, such as some aspects of occupational health, require highly skilled resources available to respond to emergency situations anywhere in the state. Every effort is made to steer these technical services through the wide network of local agencies concerned with health.

Just as in the case of the Federal Government, State Government too is seeking to divest itself of responsibility for direct operation of personal health services. Thus, State Government is endeavoring to curtail State hospitals for the mentally ill by transferring the provision of care to community resources, both public and private. California State Government also has endeavored to make maximum use of private organizations for the delivery of health services, for example,

through the pattern of care developed by the State Employees' Retirement System for State employees and persons who have retired from State service. These persons have an opportunity to select from among several approved health plans.

Local Government

The role of local government in personal health services is undergoing rapid change. Heretofore, local government in California, as elsewhere in the United States, has been concerned principally with the operation of certain facilities for the care of low-income persons: county hospitals and local public health services. In recent years, there has been a tremendous shift of responsibility towards the local departments of welfare which have become engaged in administrating medical care programs for public assistance recipients. Local government also has become engaged in other health programs inaugurated by Federal and State Governments: for example, the Short-Doyle Community Mental Health services program in California, and the Federal-State supported health program for seasonal agricultural workers and their families.

The rapid development of Federal and State supported health programs, both because of their size and variety, has created tremendous pressures on local government. An important problem facing local government with respect to health services is organization within local government departments to make maximum use of these new Federal and State programs, as well as to fulfill the traditional health functions of local government. Fragmentation of services has become severe, discrediting a great many health endeavors in recent years.

Chapter 6

NEED FOR CONTINUING STUDY

Recent expansion of health facilities and services in California reflects several influences besides the tremendous growth in population. One is the prevailing view among professional groups regarding desirable forms of patient care. Another is the impact of large-scale, publicly financed programs such as Medical Assistance for the Aged (Kerr-Mills) which has stimulated rapid construction of nursing homes. A third influence is the development during the past few years of new patterns of care -- for example, organized home care and community mental health services -- and new relationships among types of care, such as between hospital and home care.

While people in California have used less hospital care than the rest of the nation, this has been at least partially offset by greater use of nursing home and other health services.

In order to guide the further efficient expansion of health facilities and services, it will be necessary to gather systematic data on the use, cost, and other aspects of present health care resources. Public health has long maintained vital statistics, particularly birth and death statistics, as a means of guiding public health programs. Now, with the greater importance to health of physician, hospital and related services, both public and private, it is essential that information be accumulated and interpreted on these community resources for health and their use. The fragmentary nature of presently available data is clear to everyone in the field of health planning.

California needs, both in the interest of its citizens' health and that of economy, a systematic means of recording data on use of hospital and other health services, as a basis for planning the proper expansion of health facilities and services. Particular attention should be given in such a system to the use of health services by various groups of the population who are in special need: in particular, the poor, the elderly, racial and ethnic minority groups. Special attention should also be given to those particular health problems which are increasing, such as disability and long-term illness. Moreover, it would be desirable to undertake an evaluation of the effectiveness of various types of health services, for example, newer forms of rehabilitation. Finally, the absolute and relative cost of various types of health service should be included.

Surveillance of Medicare and the California Medical Assistance Program, now being developed, should generate some of these data. Compatibly, the California Health Information for Planning Service (CHIPS) should generate some, as well, that are pertinent to facilities and service planning.

Chapter 7

RECOMMENDATIONS

A report of this type is beset by one frustration: it must be fixed in time. It represents an historical moment, rather than continuing over time.

Facts regarding health status, such as disease incidence and costs of specific services, are pertinent to one period of time. They emphasize that health planning is not a completely controllable phenomenon. The shaping of personal health services cannot be quantified and crystallized in firm inventories. Too many dynamic factors now have an impact on health planning.

Epidemiology continues to reveal that the underlying causes of most conditions which now disable and kill Americans are social in character and rapidly fluctuating. At the same time, medical history continues to telescope achievements which can save and repair lives.

Persons disadvantaged in occupation, housing, education, and other social attributes are disadvantaged in health. The time between the development of a new treatment for a given type of cancer or mental disease and its widespread use may still be many years, and countless lives are not preserved.

Regardless of assumptions commonly made, tangible improvements in human health do not depend exclusively on such items as having 1 physician for every 500 persons or 3 psychiatric beds for every 1,000 persons. Improvements may be achieved by altering such ratios. But they depend even more on social and economic change. That is why we must concentrate on identifying the underlying influences which determine the tangible improvements in the health of Californians.

When this study began, Medicare was not yet a reality. When this report went to press, Medicare and California's Medical Assistance Program (Title 19 of PL 89-97) had been implemented. The aged, medically indigent, disabled -- whose health problems are the gravest -- are already receiving health services under these new programs. To many of these persons, the change is not perceptible; they seek care, as they did before, only sparingly. To others, as they become aware of the benefits to which they are entitled, health care will be a totally new experience. Consequently, actual use of health facilities and services cannot be predicted with confidence. New emphases, new types of services, new health manpower skills will be developed; prepayment by voluntary and governmental

resources will be extended. We can recommend such desirable goals. But specifying numbers of personnel or beds is secondary to guiding the direction that health planning must take to assure optimum health for all Californians.

Like the Governor's Committee on Medical Aid and Health, this study, drafted on the eve of the most dynamic change in the organization and distribution of health services, has tried to underscore the variables which interplay in health planning. The substantive recommendations are designed to point directions for State government, voluntary and official health agencies, and individual health professionals. The changes, whether they come about by legislation, negotiation, or simply trial and error, will be in the hands of these groups.

Coming five years after the Committee's report, Health Care for California, the present report permits an appraisal that should be repeated, probably at 5-year intervals. While many of the Committee's recommendations have been realized in full or in part,* this review indicates that progress has been slow in some important areas. Many of the problems are still with us, made even more urgent by the unevenness of progress. In 1970, reappraisal might well indicate new aspects of concern, and further insight into the problems yet unresolved.

PREVENTION

As indicated in Chapter 2, the leading causes of disability and death will probably be ranked in 1975 much as now. The pivot of appreciable salvage is prevention of ill health and its consequences. Through promotion and application of known preventive measures, the health of Californians could be significantly improved. Through early detection, much unsuspected disease could be apprehended while amenable to treatment.

An increasing peril is disability, removing people from economic productivity and increasing dependence on public resources -- as well as wasting their lives. Reducing disability by avoiding it is, therefore, of paramount importance.

Specifically, it is recommended that:

1 Early detection of disease through multiphasic screening examinations be incorporated into health programs. Innovations in tests should be supported. Reports to physicians and follow-up should be integrated into the programs, with continuing evaluation.

*MSC publication #4 examines the recommendations of the Governor's Committee on Medical Aid and Health, and the progress made since 1960 in fulfilling them.

2 Since the economically disadvantaged are most deficient in health care, multiphasic screening should particularly be made available to all persons receiving public assistance. With the cost of substantially all services covered by the California Medical Assistance Program, this group of persons could efficiently receive needed diagnostic, treatment and rehabilitative services, as well as advice on avoiding health risks through preventive measures, as part of the follow-up to multiphasic screening.

3 Measures to control cigarette smoking, identified as a cause of death from lung cancer as well as cardiovascular and respiratory diseases, should be implemented. In the absence of more stringent Federal action, the State should reevaluate the recommendations of the Governor's Advisory Committee on Cigarette Smoking and Health, and devote resources toward controlling this gross health hazard.

4 Since tuberculosis is potentially eradicable, case finding programs should be intensified among "pockets of risk." Adapting case finding and treatment services to the particular needs of high-risk populations has proved to be highly effective; innovations in developing such services, for which Federal funds are available, should be encouraged.

5 Since venereal diseases are on the increase, especially among economically depressed segments of the population and teen-agers, case finding and informational programs must similarly be intensified and adapted to specific community needs.

6 Since human waste from social pathology is increasing, greater understanding of the life styles contributing to disease is needed to identify social, as well as biological, factors requiring modification.

7 Special efforts to promote and provide adequate prenatal care should be undertaken, especially to motivate women in high-risk groups. Prevention of mental retardation and other birth defects inhibits disease potential at its source, thereby sparing needless personal suffering and impairment, and the allied burdens to the economy and family life.

8 More serious attention should be paid to the social and health aspects of planning family size and spacing. As recommended by the Governor's Population Study Commission, county government should ensure that family planning services are readily available, and the State should create a special subvention to local health departments to establish and extend comprehensive family planning services.

HEALTH MAINTENANCE AND PROMOTION

While government health programs now pay for services to persons in need, it is of equal importance to motivate persons to seek the care they require, and to maintain habits of living that will protect health.

Specifically, it is recommended that:

1 Vigorous promotion of health maintenance should be undertaken by the State, voluntary and official health agencies. Concepts of "preventicare" and healthful living must be integrated into existing programs, along with proper allocation of resources to maximize diagnostic and therapeutic services.

2 The traditional methods and avenues of health education must be widely extended. Resources should be made available to develop health advisers selected from and living among persons with poor health conditions. Research has indicated that many persons are not aware of the benefits to which they are entitled,(28) so that special efforts must be made to inform and motivate individuals to use the services and facilities they need.

3 Traditional communications channels must be expanded. Health promotion, through broadcast and print media, should be greatly intensified. The State should not only take advantage of public service opportunities for disseminating, at low cost, information regarding disease prevention and health maintenance, but should provide resources to guide and develop appropriate materials in a variety of media. The active promotion of health maintenance should not be the burden of voluntary agencies alone, but should be a regular State mission, emphasizing a positive, unified attitude toward preserving good health.

4 Imaginative approaches to health promotion should be encouraged. The State should recruit science writers, graphic artists, and others having expertise in communications. Resources to produce and place effective materials should be provided. Demonstrations involving media innovations should be supported; creative staff must learn to be effective in the social and cultural climate of the audiences being reached.

5 The mission of multiservice centers -- "one door" evaluative, information and referral centers in 13 depressed California areas -- must include promotion of available services in the health field, and active follow-up to assure that clients actually seek and receive needed health services.

6 Now that the medically indigent are receiving many health services in the private sector, from physicians and other sources, health promotion and counseling must become an integral part of diagnostic and therapeutic services. Physicians should be urged to study the social and environmental factors affecting a person's state of health, and to offer counseling appropriate to the individual's total socio-health circumstances.

7 Since the health deficiencies of the economically disadvantaged are the gravest, promotion of health and means to preserve it are most urgent among such high-risk groups as: Negroes, Mexican-Americans, migrant families, the aged, broken families, the disabled and blind. Innovations in services, even such simple ones as the times and places that services are made available, will minimize the gap between mere advice and actual use of service.

8 The State should adopt an effective approach to fluoridation, on a statewide basis. As a known, inexpensive, safe and effective deterrent to dental disease, resources and legislative action should be employed to extend this preventive measure to all Californians.

REGIONAL AND STATEWIDE PLANNING

To maximize the productivity of health manpower, technology and facilities, planning should be developed along regional as well as statewide lines. Economy is often sacrificed by duplicate, costly equipment for competing services in a given community or region. Health manpower, as specialization dominates the scene, tends to become scarce. Certain parts of the state, where population is sparse, cannot hope to attract the range of specialists or maintain rarely needed equipment. Yet, it must be possible for people to be aware of and have access to specialized care when they need it.

Planning and action on a regional basis is becoming the pattern for pollution controls, for hospital development, and other aspects of modern complex health services. Regional programs for the mentally retarded, for victims of kidney disease, for heart, cancer and stroke, make it possible for essential diagnostic, treatment and rehabilitative services to be concentrated and yet available to all. At the same time, economies are achieved which facilitate optimum, comprehensive care.

Specifically, it is recommended that:

1 Regional planning of hospitals, and related health facilities and services, already proved to be an effective pattern, continue and expand.

This will encourage hospital services to be of the nature and in the locale where they will do the most good. Considerations of total regional planning -- land use, transportation, industrial growth -- should be more closely integrated into hospital planning.

2 Generation of appropriate data to assist in the regional planning of hospitals and other health facilities should be supported by the State, as well as private and professional groups. A centralized data collection and retrieval system, completely operational within a very few years, is essential.

3 Planning should encompass comprehensive services, not simply facilities. As demonstrated in new programs to assist the mentally retarded, regional programs must be cohesive, geographically sensible, and cover the broad spectrum of essential services. Agreements to obtain out-of-hospital services in the community should be encouraged.

4 Growth and improvement of facilities must be responsive to specific need. The State should encourage institutions not to duplicate equipment that will be infrequently used, but to establish agreements whereby the use and cost of such equipment is shared.

5 Planning of services and facilities must be flexible, attuned to the special requirements of the population being served, the capability for using subprofessional manpower to perform essential tasks, innovations in payment and distribution of services which can permit quality -- and economy.

FLEXIBILITY - LOCAL HEALTH GOALS

No design for regional or statewide planning will necessarily be effective if there is rigidity. For not only is every community within a region different, but neighborhoods are different. California has its share of prosperous "bedroom" towns; shiny new cities; remote, rural and mountainous villages; and urban slums. The potential for today's suburbs becoming tomorrow's "slurbs" is great. If the poverty cycle is not broken, today's slum child may be the "Skid Row" transient in future decades. The same vitality and rapid action which creates progress in some directions spells chaos, disruption in others. It remains crucially important not to overlook the particularized problems of an individual or neighborhood when planning for an entire region or the state.

In health planning, as in other aspects of State planning, the role of the State is clearly one of guidance and support, of helping communities and neighborhoods to identify the source and severity of a problem and to devise suitable solutions.

Specifically, it is recommended that:

1 Since State control and interference in local affairs is not desirable, planning must emphasize participation at the community and even neighborhood level -- with State officials offering leadership and technical assistance.

2 Involving the economically and socially disadvantaged in the planning and delivery of their own health services is an effective way to promote their use, and to adapt services to the needs of high-risk population groups.

3 Since the treadmill of despair and neglect must be severed with all means available, voluntary and official health agencies should take advantage of all Federal and State programs for which their community qualifies. The State must assure that local agencies are informed and assist them in satisfying eligibility requirements.

4 In future State programs related to employment, housing and educational assistance, provision for health services should be integrated. For example, examination and referral of preschool children enrolled in the Head Start Program enables these children, previously limited in medical care, to receive essential services.

Regardless of the route, all persons at high risk due to social and economic inequities must be channeled into the mainstream of medical care. While the payment mechanism is an incentive, awareness and application of preventive, as well as therapeutic measures, must be intensified on an individualized base where possible.

CONTINUITY OF CARE

The ideal of continuous care is increasingly accepted. One manifestation is the "one door" concept, wherein an individual receives attention for all his ills on a single premise. Hospital-based group practice is another approximation and a functioning example of this ideal. In such circumstances, preventive medicine can become part of total health care where it can accomplish maximum results.

Specifically, it is recommended that:

1 The "one door" concept, demonstrated to be effective, be advanced as a desirable model.

2 Efforts be intensified to simulate continuity of care by agreements among insurance carriers, agencies and institutions providing quality out-of-hospital services (e.g., home care, rehabilitative services, mass screening), and professional associations.

3 The personal physician-patient relationship be reaffirmed as an essential ingredient in the health care of every individual. A physician must lead the health team providing services.

4 Sound continuity of care must respect the patient's total situation -- his economic, educational, housing and occupational limitations. A "social prescription" should be considered part of complete health care.

PAYMENT FOR HEALTH SERVICES

The passage of new governmental health programs has removed one of the serious deterrents to health care of the poor: second-class, "charity" medical care. The historical dual system of health services is waning; the ability of the indigent to obtain services in the private sector, with the same dignity of a person able to pay for comparable care, in itself promotes health.

But medical care is still not reaching all Californians. Many persons continue to be ambivalent about using and paying for health services, especially those for which the need is not gross.

Specifically, it is recommended that:

1 Those covered by governmental health benefits should be enlarged to cover all those in need, by eliminating categorical and other barriers.

2 Comprehensive health care of high quality, providing choice of physician, be available to <u>all</u> Californians, with financing sought from individual, private and public sources.

3 Prepaid dental plans be integrated into existing models (e.g., union health and welfare plans).

4 Preventive services be covered by all health plans.

HEALTH MANPOWER

It is evident that if highly specialized persons were required to perform all tasks related to health care, many Californians would receive little or no care. Increasingly in medicine, as in other work, machines have been developed to perform many tasks. Also, less well-trained persons can render valuable, essential services and thus release specialists for the highly technical activities their training equips them to perform.

But, especially whenever health services are performed by persons with less training, meticulous attention to the quality of service is essential.

Specifically, it is recommended that:

1 The State acknowledge that a deficit of physicians will continue through 1975, since medical education development has not kept pace with needs. The State is urged to assist private institutions capable of expanding first-year medical student places, as well as establishing and supporting new medical schools at the University of California.

2 The State develop a grant-in-aid program for medical, dental and nursing students to assure opportunity for all adequately prepared young people to enter these professions.

3 The State expand existing institutions training allied health personnel: social workers; physical, speech and occupational therapists; dental hygientists and assistants; and others needed to perform technical services in the health field.

4 Plans for training various health aides -- home health aides, health advisers, and others -- be given State as well as Federal support. The highest priority for recruitment and placement should be among groups now deficient in health services.

5 Ancillary health personnel, especially in light of the increased demand for their services in new health programs, should be certified or registered according to appropriate standards. This is of particular importance for new types of aides, where quality may be diluted by rapid training.

6 The present fragmented standard-setting for professional health personnel should be corrected. The State should extend and consolidate its present licensing authority to embrace health professionals now registered or certified in a variety of ways.

7 Professional associations should continue their efforts of self-discipline, including the formulation of standards of performance and ethical relationships. State surveillance, required by new governmental health programs, and State licensing agencies should serve as double-checks on quality controls.

RESEARCH

This report has emphasized that research is a crucial arm to sound health planning. The epidemiologic technique of investigation of disease occurrence and causation is essential to control efforts.

Support for research into California's health problems has come largely from the Federal Government, private foundations and, to some extent, from the State itself. Problems made increasingly acute by California's population growth are being examined, but not as vigorously as they should. In part, this is because needed resources are not being allocated by the State; competition for Federal research funds is keen, and decisions must reflect national rather than specific State needs.

Specifically, it is recommended that:

1 State funds be made available to support pertinent investigations of California's unique socio-health problems, as well as those dealing with its specific environmental changes affecting health.

2 The State should financially support demonstration projects designed to establish new patterns of personal health services. This includes not only projects where new types of health services are tested, but projects concerned with access to care, promoting continuity of care, and disease control, such as smoking withdrawal clinics.

SYSTEMATIC DATA COLLECTION AND ANALYSIS

Many specific questions concerning costs and use of services could not be answered in this document because data were lacking. The need to collect continuing, standardized data on costs and utilization of services, especially by persons with special health problems, is essential to sound planning.

In order to keep pace with the demands for planning, it will be necessary to move with some speed toward a system of gathering pertinent information. The California Health Information for Planning Service (CHIPS) is one approach; surveillance of new governmental health programs is another.

The recommendation for a statewide health data bank is reiterated here. The value of a unified system, a clearing-house as well as a functioning font of data, cannot be overestimated. It requires a partnership between State Government, voluntary agencies of all types, and individuals -- all those engaged in making California a healthier place to live.

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NOTES

You may be interested in other publications by this Department concerned with health planning and medical care. Single copies of the following MCS publications are available on request.

#1 Scope and Purpose of the Medical Care Studies Unit and Evaluating the Quality of Medical Care

#2 Development of a Hospital Service Index

#3 Health Care of Old Age Security Recipients in Santa Cruz County, January 1958–June 1961

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